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LECTURES ON SURGERY, MEDICAL AND OPERATIVE,

DELIVERED AT

St. Bartholomew's Hospital;

BY MR. LAWRENCE.

LECTURE II.

On the Nature and Seat of Diseases.

IT is the object of medicine to ascertain the nature and seat of diseases, in order to discover the proper modes of treating them. If we understood in each instance what organs are diseased, and how they are affected, there would be very little difficulty about the treatment. We should then be able to give an appropriate name to each disease, and to arrange them according to their natural affinities; that is, we might establish a rational nosology, or arranged catalogue of diseases. Unfortunately, in a great many instances, we are unable to determine the nature of disease, and in not a few cases, we cannot even settle the exact seat of it. Hence you will not be surprised at finding, that our names of diseases are in many instances calculated to mislead, and that those catalogues of diseases that are called nosologies, are often really worse than useless. The difficulties that I allude to, are, however, not experienced so much in that part of the subject which is the immediate object of our attention—*surgical diseases*; they are more felt in affections of the *internal* organs, where the means of investigation are not so numerous, and where there is greater difficulty in all parts of the inquiry.

Most persons imagine, that they understand very well the meaning of *health* and *disease*; yet it is not altogether easy to give a definition of those two states that is completely satisfactory. Health and disease have been said to be *opposite* states, and, under certain circumstances, we may admit this representation to be correct. For example, a person in a state of full health may be considered to be nearly in an opposite condition to a person in the last stage of typhus fever. However, health and disease are not to be regarded simply as two states that can be thus contrasted; for under each of these terms there is included a great variety of conditions, differing materially from each other. On the one side, the state of health passes, by insensible gradations, into disease; and on the other, the state of disease is shaded off, if we may use the expression, into health; so that when we come to the point where the two conditions approach each other, we often find difficulty in determining what is health and what is disease.

The human body is an aggregate of organs, each executing its own function, and all concurring in the general purposes of the organisation, which are, to preserve life, to keep up the relations which connect the individual with the surrounding world, and to continue the species. When the structure of the organs is perfect, and when the functions are regularly executed, the individual is said to be well, or in a state of health. The notion of health, therefore, combines these two circumstances—*perfect structure*, and *perfect functions*, i. e. *perfect* in reference to the purposes just mentioned.

The word *natural*, as applied to the healthy structure, is rather equivocal, for we must admit, that disease is a part of nature. The French and Germans use the word *normal*, in order to designate what we call the healthy structure. This term *normal*, is about equivalent to the English expression, *regular*. Thus the normal, regular, or healthy structure, and the regular execution of the functions, would be opposed to the diseased or the irregular structure of the organs, or to the imperfect or irregular execution of the functions.

Disease has been defined an imperfect or irregular execution of one or more functions. This definition is very defective; it omits a circumstance of principal importance in the consideration of disease, namely, the state of the organs. The definition is true, so far as it goes; that is, wherever we see an imperfect or irregular execution of any func-

tion, we may safely conclude that disease exists. But we may have disease, and that of a very unequivocal kind, without any observable deviation from the natural state of any function. *Warts* and *corns* are diseases; at all events, *adipose* and *encysted tumours* are so: yet those may arise, and acquire considerable size, without the individual being actually aware of their existence; and even when they have arrived at very considerable magnitude, they do not disturb any function; they are, perhaps, only inconvenient by their bulk. Cancer of the breast commences with an induration and swelling of the mammary gland; and these may take place so insensibly, as to attain a considerable size before the female is aware that that disease exists, which she at last discovers accidentally.

We may call disease a deviation from the normal, regular, or healthy state of any solid or fluid part of the body, or of any function. These various circumstances may be exemplified in the case of the *stomach*. The stomach may be the seat of inflammation, or of cancer; in both cases there is a manifest change in the structure of the organ; in the former a temporary, in the latter a permanent change. In the case of *heartburn*, there is an acid secretion from the stomach; and in the *yellow fever*, there is a rejection and vomiting from the stomach of a peculiar dark substance, something like coffee grounds, which is called the *black vomit*. Here you have the fluid secreted by the stomach completely changed. Again, in nausea and sickness, and indigestion, you have the function of the organ disturbed.

You will, perhaps, be inclined to think, that the three circumstances which are included in the definition I have now mentioned, might be properly reduced to one. You will ask, whether the function of an organ can be disturbed, if the structure remain entire? You will inquire if the fluids can be altered, so long as the solids remain in their natural state? These questions are very reasonable and proper. I can entertain no doubt, that if our knowledge of disease were perfect, we should be able to trace, in every instance, the alteration of function to change in the state of the organ; but, unfortunately, our knowledge of disease is by no means perfect. In many instances we see impaired function, when we cannot ascertain what the condition of the organ is, more especially in internal disease. In other cases there are altered functions, or manifest symptoms of disease, but we are unable to say what organ those symptoms should be referred to. Therefore, in our present imperfect state of knowledge, we must admit alterations in the functions, or change in the state of the fluids of the body, as diseases, without meaning to assert that they can take place independently of alteration in the organs themselves.

The changes which the organs may undergo, differ in degree. They may be so considerable as to be visible after death, or there may be an alteration merely affecting the living condition of the part, and not leaving behind it any trace discoverable after death. I do not believe that a function can be impaired while the organ remains in a perfectly regular and healthy state; for, in fact, what are the functions of the body? Merely the results of the exercise of the organs. The functions are the organs themselves in a state of active exertion; the organs and the functions are causes and effects. Perfect functions imply, natural or healthy organs; imperfect or irregular functions, suppose disordered organs. To say that the functions are disordered without any change in the organs themselves, would be to say that an *effect* has taken place without a *cause*.

The organs, then, may undergo those serious changes which are visible upon examination after death, or they may experience the slightest alterations which affect merely the living condition of the parts. The living condition of any organ which is necessary for the regular execution of its function, comprises not only the structure as we see it after death, but also all the various internal movements. It includes a healthy state of all the fluids, whether circulating or at rest; a regular supply of new materials, a regular removal of the old parts, the influence of the nervous system, and, in many cases, the sympathetic operation of other organs. Now nearly the whole of these latter circumstances elude our observation; we have no means of ascertaining them; sometimes we see how organs are affected by the kind of changes I have just now alluded to. The function of the *brain*, for example, will be suspended; sensation and voluntary motion will be at once put a stop to, when the action of the *heart* is suddenly stopped, as in syncope; or when the function of the *lungs* is interrupted, as in suffocation; yet, if we examine the brain, we do not find any change in its structure, but what happens when the heart ceases to act. No more blood is sent to the brain, and its influence ceases. When the function of the lungs is stopped, the blood no longer undergoes that change from venous to arterial, which is so essential in maintaining the action of all parts. Black blood is sent to the brain instead of scarlet, and its functions are immediately interrupted. Thus, in both these instances, we see that changes in the living condition of the brain affect its functions, though no alteration in its structure is observable after death. When we speak of a disease being *func-*

tional, we merely mean to express that it is not accompanied by any change in the state of the *organ*, observable on dissection. We use *functional* in contra-distinction to *organic*, which denotes visible change of structure.

In this country, the terms *functional* and *organic* are often applied rather loosely. Strictly speaking, we should range under the head of *organic diseases* all changes in the condition of an organ which we can ascertain by dissection. Serious change often takes place in inflammation, but it is transitory; it may pass off, and leave the organ in a state of integrity again. The word organic is not used to denote that sort of change; it is applied to permanent changes, especially such as do not admit of recovery; for example, *cancer*, *fungus hæmatodes*, *ossification*, *tubercles*, and so on. The same looseness of language is observed, in this respect, in writers of other countries. Thus Richerand does not include inflammation among his *lesions organiques*, but places it in the *lesions vitales*, as if it were an affection of the vital properties of the part.

The difference between functional and organic disease has been sometimes marked by the term *disorder* and *disease*, in our own language; but this is not sanctioned by common acceptation, nor by etymology. In common language, disorder and disease are synonymous; and if you come to inquire into what is the meaning of the words, the thing appears perfectly apparent. What is disease? *Dis-ease*. An interruption of *ease*—a change of feeling. Then, disorder? *Dis-order*. An interruption of *order*; that is, an interruption of the regular functions of the body.

The examination we make after death, is not a satisfactory criterion of the changes which may take place in the state of an organ during life. Certain changes, of a very obvious kind, take place during life, and of which we can trace nothing after death. In the case of *erysipelas*, and in some other diseases of the skin, there is a very manifest determination of blood to the skin during life; considerable distention of all the blood-vessels of that part; considerable redness of it; but these appearances are lost after death. The redness in ophthalmia disappears in the same way. We cannot therefore conclude, because we observe no change after death, that no change has taken place during life; and in considering whether functions can be altered without disease of the organs themselves, our principal object should be to ascertain, if possible, whether there is a change in the living condition of the part, which examination after death may fail to discover.

Again; before we can determine that no change whatever has taken place in an organ, our examination after death must be very accurate, and it should be performed under the guidance of a full knowledge of the healthy, normal, or regular state of the parts; and without the person who examines has that knowledge, it is impossible to determine whether certain changes may not have taken place and been overlooked.

Thus we find, that in proportion as pathological investigation after death has been conducted with greater accuracy, the number of diseases, supposed to be functional, has been diminished. In the case of *fevers*, for example, which have been supposed to be general diseases, more accurate pathological investigation has found out, that many organs of the body are considerably diseased. To many *affections* of the *head* the same observation applies.

The division then of diseases into functional and organic, in the view we now take, must rather be regarded as a distinction in *degree* than in *nature*. In the case of diseases called functional, the changes are such as to leave only slight, or, in many instances, no traces of change after death at all; in the diseases called organic, the alterations in the natural conditions of the part are of a more considerable kind, and leave behind them visible appearances after dissolution.

I can by no means agree in opinion with those who regard functional diseases as affections of the vital properties, without any reference to the state of the organs. How can we suppose that the function of a part can be altered, when the organ remains in the healthy state? What would you think if you were told by a watchmaker that a watch was perfect in all its parts, but that its movement was affected? But if he should tell you, "I have looked over the watch very carefully; it does not go well; there must be something wrong, but I cannot discover where," then he would speak very rationally, and that is the situation medical men find themselves in, in cases of functional disease; they see irregularity, but do not discover what it depends on. In such a case they should conclude that the art is imperfect, or their own knowledge deficient; not that functions can be impaired while the organs are perfect.

Now this is not a point of mere speculative importance; for those who believe in vital, or functional disease, direct their means of treatment according to their views. Their object is to remedy the imperfection of those functions, to excite vital properties which appear defective in energy, and to rouse those parts to activity which seem to be dormant. Hence a treatment is instituted which is calculated to aggravate disease rather than to benefit the patient. Persons

who entertain views of this kind, seeing a *paralytic* affection, observe the loss of power only. If a patient is unable to move the limbs of one side, they say the nervous power is defective, and it is necessary to rouse it. Thus they treat the paralytic limbs by stimulants of all kinds, and they administer general stimuli. More accurate pathological research proves, in these cases, that disease exists in the head, and that it consists, perhaps, in increased determination of blood, in effusion of blood or serum, or in other changes that would be aggravated by this stimulating treatment.

[Mr. Lawrence illustrated the same point, by referring to the tonic and stimulating treatment of affections of the retina, causing impaired vision; to the treatment of fever, grounded on the notion of debility; and to that of dyspepsia, by tonics.]

It has been contended also, that the *fluids* cannot be altered in their properties, except through the medium of some change in the *solids*. Now the fate of the fluid part of the body, with reference to disease, has been very singular. At one period the explanation of disease turned entirely on changes that were supposed to take place in the fluids; and, at a subsequent time, it has been asserted that they have nothing to do in the production of disease. At an early period, when anatomy and physiology were but little known, the fluids were supposed to be subject, in the living body, to putrefaction, fermentation, concoction, acidity, alkalescence to become thick, and thin, and so on. The means of treatment were directed with the view of remedying such alterations. When anatomy and physiology came to be investigated, and the changes that had taken place were observed after death, of course all these notions were at once put an end to, and from that time to the present the very term of *humoral* pathology, which includes this sort of explanation of diseases, has become a sort of by-word of contempt.

It has been considered, that the states of the fluids can give no assistance in the explanation of diseases. Probably this is going too far. You will consider, that all the new materials enter the body in a fluid state—that they are all taken up into the system through the blood. When you consider the various kinds and quantities that enter the body in this way, I think you cannot help supposing, that there must be considerable variations both in the quantity and in the composition of the blood, and that you cannot help admitting, that these variations may have considerable influence on the organs. Only compare, for instance, an individual in a state of health, with a plethoric person, on the one side, with a scorbutic sailor, or a chlorotic female, on the other, and I think you will at once admit, that there may be differences in the state of blood, which may explain the condition of disease. When we see the various states of the urine, which we can trace to the variations in quantity, or kinds of food, we cannot help allowing, that the conditions of the fluids deserve consideration in estimating disease. We cannot help admitting, that though the doctrines which constituted the humoral pathology were absurd, and, most of them, unfounded, this forms no ground for excluding from our consideration altogether, the state of the fluids. The investigation of the fluids is difficult. Animal chemistry has been cultivated, however, much of late years, and certain ingenious facts have been brought to light; yet, generally speaking, we cannot derive much practical insight into disease, or the means of removing it from the state of the fluids. This, however, is no reason why we should not expect, in prosecution of further inquiries of this kind, to derive considerable assistance from them.

In conclusion, Gentlemen, I may express to you my opinion, that if diseases were perfectly understood, we should be able, in each instance, to refer the altered functions to some change in an organ or organs; consequently, the changes in the functions would merely constitute *signs* or *symptoms* of disease. I have already intimated to you, that the state of medical knowledge is hitherto too imperfect for such a purpose. In many cases, and even in some of frequent occurrence, we are altogether unable to distinguish the organ disturbed. Thus, for example, in common fevers, the profession are by no means agreed as to the particular organ, which is the primary seat of disease.

In *intermittent fevers*, we are quite at a loss to assign the primary and essential seat of disease. What name should we give to *tetanus* on this principle?

In *internal* diseases particularly, the changes of functions often cannot be referred to any assignable affection of any particular part. We are, consequently, obliged to name such diseases after their external and visible signs; being sensible, at the same time, that the names so given are applied rather to symptoms than to diseases. Diabetes, hæmaturia, etc., are examples. Dyspnœa, asthma, and indigestion, are analogous instances. If, in our present state of knowledge, we use these terms, it must be to denote diseases; we must bear in mind that they *only* represent *symptoms*, and we must investigate the condition of the organs which give rise to those symptoms, in the hope of determining the precise seat and nature of disease. All organs in the human body may be *primarily* affected; that is, they may be affected by causes acting immediately upon them; and all organs may also

be affected *secondarily*; that is, in consequence of disease previously existing in some other organ. If boiling water be poured upon the skin, inflammation of the skin is produced. If a wound be inflicted, we have the same result; these are primary affections of the skin. If a person take certain sorts of food, for instance, some kinds of shell-fish, or if he get his stomach disturbed in any other way, he may have an attack of *nettle-rash* or *urticaria*, the skin being affected secondarily, through the medium of the stomach. If a person have a blow on the head, or if he employ his mind intently, he may get headach, or other disorder of the head. Again, he may get the same kind of symptoms if his stomach is overloaded, or his bowels are costive. The stomach may be disordered, and a person may become sick, in consequence of eating certain food. Again, serious injuries to the head will produce sickness, and these are primary and secondary diseases of the stomach.

Primary disease is also called *idiopathic*, and secondary, *sympathetic*. Idiopathic disease is an affection of any part produced by a cause acting immediately on that part. Secondary or sympathetic disease is excited by the existence of disorder in some other organ.

I fancy there will, or, at least, there ought to be, no difficulty in recognising that all organs may be primarily diseased, that each part may be disturbed in the execution of those functions which naturally belong to it. Thus the lungs, stomach, intestines, urinary organs, &c., may be affected through causes applied to them in the execution of their several offices; yet, when persons have attended much to some part, they have sometimes been disposed to refer all diseases to primary disturbance of such part. Thus, one has attached very great importance to diseases of the liver, and has fancied this organ to be the source of almost all disease; another has regarded the stomach and alimentary canal in the same light. Now I should regard all these views as partial and erroneous, and have no hesitation in believing that all parts may be originally diseased, and, of course, in admitting that all may be secondarily disordered. In proportion to the importance of an organ, will be the influence that it may have over others. No doubt, in this point of view, the parts that are concerned in the office of digestion,—the stomach, alimentary canal, and various subsidiary organs, will have great influence in exciting disease in other parts, yet we must not look to them *alone*, as the primary seat of all disease.

In most diseases, you find symptoms referrible to both these heads; that is, certain symptoms which arise immediately from the disturbed state of the organ, and others, which are owing to the sympathetic influence of that organ on other parts of the body. When we say that one part sympathises with another, we merely denote the fact, that the affections are co-existing. What is the meaning of the word sympathy? It merely means *suffering with*. The physical is very similar to the moral sense of the term. When we see a person in a state of pain, suffering, or anxiety, we feel an unpleasant emotion; we sympathise with the individual. The word merely denotes that one affection takes place in conjunction with another. It does not explain at all how that happens. The nerves, with the brain and spinal chord, afford an explanation how the various organs are connected together in their morbid, as well as in their natural functions. The sympathetic influence is more powerful, in proportion as the organ is of greater importance in the animal economy, as the disease in that organ is more violent, and as the individual, in whom the disease takes place, is more irritable.

EXPERIMENTS ON THE VIRUS OF RABID ANIMALS.

In No. 270 of The Lancet, we gave an extract from a paper in Graefe and Walther's Journal, on the experiments which Dr. Hertwich, professor at the veterinary school at Berlin, had made upon rabid animals. Having lately had an opportunity of perusing Dr. Hertwich's work itself, we deem it worth while to add to the above extract some interesting data, and especially the results which were obtained from inoculation with the saliva of rabid dogs.

The two different forms of rabies, the one of which Dr. Hufeland calls the acute or fierce, and the other the chronic or quiet rabies, are not two distinct diseases; for inoculation from an animal affected with the one, was frequently observed to produce the other. In the *acute rabies*, the dogs were observed to change their manners, and to become either more lively and irritable, or more lazy and morose; they generally become of very changeable temper, and are at times seized with restlessness, which forces them to run about: most of them know and obey their master until a very short time before death. At the commencement of the disease, the animals often show a great desire to lick cold things. They lose their

appetite, especially for solid food, but frequently eat wood, turf, straw, or their *fæces*: this symptom is very characteristic, and the contents of the stomach in the post-mortem examinations of dogs, are of the greatest importance to determine whether there has been rabies or not. No rabid dog shows a dread of water at any period of the disease; they drink, lick, and behold it without any dislike, and sometimes exhibit even a great avidity for it, although they often have some difficulty in swallowing it, on account of the swelling in the throat; there is also no dread of light, nor any dislike on looking at shining surfaces, or being exposed to a current of air. They are very costive, for some period at least; and, in general, have no increased venereal desire. The most important and constant symptom is, a peculiar change in the voice, and in the manner of barking; the sounds emitted are either higher or deeper than usual, rough, hoarse, disagreeable, and indicative of distress. The bark does not consist of repeated uninterrupted sounds, but the first bark goes into a sort of short howl, so that it is neither a barking nor continued howling, but between both; during it, the mouth is lifted up, as in dogs who are made to howl by music. This change of the bark is very easily recognised after having been once heard, and is considered by Dr. Hertwich as pathognomonic. Phlegmatic dogs, when affected with rabies, hardly ever show an increased desire of biting; but irritable, snappish dogs, are seized with a real fury, in which they attack and kill every animal which they can get at, and destroy and bite at every thing near them; sometimes, even, they lacerate their own bodies. It appears, that their rage for biting is first directed against cats, and lastly against men. They generally bite without any previous barking or growling, and the bite mostly consists of a sudden snapping and tearing by the teeth; if another dog comes near them, they smell at his mouth and genitals, and at the same time wag with the tail before they snap at him; they also often snap at the air, as if it were to catch flies. The external appearance is but little changed on the first day; on the second, the eyes become injected and somewhat irritable by strong light; the skin at the forehead is corrugated, and they look as if they were morose and drowsy; at a still later period, the eyes become lifeless and turbid, as if covered with sand; the whole face, or part of it, or the tongue, swells; they become greatly emaciated, and their coat is rough. As long as they are not quite exhausted, they carry the tail turned upwards; at the last degree of debility, it hangs down; the mouth is rather dry, and hardly ever covered with foam; the hind legs are weak from the beginning of the disease, and always become paralysed before death.

In *quiet rabies*, the animals are never restless, but become dejected, very tranquil, and sad. The most important and characteristic symptom consists in the lower jaw hanging down, as if its muscles were paralysed; this depends, not, as has been asserted, from a spasmodic contraction of the muscles which draw down the lower jaw, but on a real paralysis of those which close it; the lower jaw is, at least without any difficulty, lifted up, and kept *in situ* by very slight pressure. It happens, however, frequently, that when the animal is irritated, it recovers for a short time its faculty of biting, of which it appears, however, to have no increased desire. By the above symptom, the dogs are prevented from swallowing; the saliva constantly flows out of the mouth, and the tongue is a little protruded. The bark is changed in the same manner as in fierce rabies, but is very seldom heard, most of the dogs emitting hardly ever any sound, except when irritated. The other symptoms, emaciation, loss of appetite, absence of real hydrophobia, &c., are the same as in the other form.

The duration of the disease is nearly equal in both forms. The animals die within six or eight days, apparently from exhaustion; in very few, only, sudden death, as if from apoplexy, ensues at an earlier period.

The post-mortem examination of about 200 dogs, led the author to the conclusion, that there is no constant morbid alteration found after rabies; and he is even inclined to assume, that wherever the post-mortem examination of a dog exhibits no evident cause of death, there is a great probability of his having been affected with rabies. The stomach is often, but not always, inflamed, and mostly contains a reddish, yellow, or greenish mucus, and indigestible substances, wood, stones, &c., and but seldom any food.

The most interesting part of the paper relates to the repeated experiments of inoculating saliva, blood, and nervous substance, into fresh wounds, and administering these substances internally. The following results will be found of the greatest importance with respect to forensic medicine:—

1. Of 59 dogs who were inoculated, 14 became affected with real rabies.

2. In those cases where the inoculation failed, no assignable cause of the failure could be discovered. There exists, accordingly, a peculiar disposition for the virus of rabies, as for that of other contagious diseases. (A mastiff, four years old, went through regular series of experiments without any effect being produced; while seven

other dogs, who were inoculated with him, and in the same manner, became rabid. Some dogs were several times inoculated before any contagion took place; in others, this effect was observed after the first experiment.)

3. It appears, accordingly, that *in cases of doubtful rabies, one or two accidental or artificial inoculations are not sufficient to serve as negative proofs of the existence of rabies.*

4. No communication of the disease ever took place by the perspiration; the contagious matter of rabies cannot, therefore, be of a volatile nature.

5. *Its vehicle is not only saliva and the mucus of the mouth, but also the blood, and the substance of the salivary glands.* It does not appear to exist in the nervous pulp.

6. The power of infecting exists at every period of the confirmed disease, and *even for about twenty-four hours after the death of the animal.*

7. The virus of rabies *appears to be inactive if administered internally*: of 22 dogs who were made to swallow it, none took the disease.

8. The application of saliva to fresh wounds appears to be as often followed by rabies, as the bites of rabid animals.

9. It is, consequently, beyond all doubt, that the disease is neither produced by the lesion, according to Girard's opinion, nor by the fear of the patient, as has been repeatedly asserted.

10. The opinion of Bader and Capello, that in dogs who had become rabid from the bite of an animal primarily affected with the disease, the saliva did not contain the contagion, and that it existed only in primary rabies, has been proved, by several experiments, to be erroneous. (This perfectly agrees with Magendie's experiments, who, having inoculated a dog with the saliva of a patient affected with hydrophobia, the animal became rabid after a month, and bit two others, who were also infected; from these last, no further contagion was observed.)

11. During the period of the inactivity of the virus, there is no morbid alteration observable, either locally or in the general health of the dog thus infected, nor does the lower surface of the tongue ever exhibit vesicles. There exist, accordingly, no precursory symptoms as in other contagious diseases.

12. The disease generally breaks out within fifty days after the inoculation, or the infliction of the wound; Dr. Hertwich never observed it occur at a later period.

13. Inoculation or infection from animals affected with fierce rabies, very often produces the other modification of the disease, and *vice versâ*; they are, consequently, only different forms of one and the same disease.

14. It is an erroneous opinion, that healthy dogs were able to distinguish those affected with rabies by the smell; this is not the case, nor do they abhor food mixed with the secreta or excreta of rabid dogs.

Relative to the causes of primary rabies, the author has not been led to any certain conclusion; the different kinds of dogs are equally liable to it, age and sex have no influence on its origin, nor the time of the year, weather, regimen, &c. Excessive heat or cold of the atmosphere has, according to him, no effect whatever on the development of the disease; this is also confirmed by the fact of cart and yard dogs being, on the average, much less affected with primary rabies than house-dogs.

ON RODERICK MACLEOD'S

"NECESSARY SYSTEM OF THINGS."

"Evil, be thou my good."—MILTON.

TO JAMES JOHNSTONE, ESQ., M.D.

DEAR JOHNSTONE,—The doubts which I last week ventured to express on the truth of Roderick's proposition, gain additional force from the arguments by which he attempts to support it. "Self-interest," he says, "may assume an infinity of different shapes, but at bottom it is still the same thing; and there may be a thousand ways of rewarding mercenary conduct, but something honourable or profitable is always due." We did not, my dear Doctor, want to be told, at this time of day, of the Protean genius of "self-interest;" we have had the most ample proofs of its versatile character. The question is not about the existence or quality of this attribute; but whether it can, and how it may, be restrained within salutary bounds. Of the power and presence of the flood there is no doubt; we want merely to confine it within its proper channels. Deep, constant, and forcible, as is the current of this universal motive, it may, like the mightiest torrents, be made subservient to the productions of good, as the Nile, nine-

tenths of whose waters we are told are expended by the industry of man in fertilising the fields of Egypt. Neither has it ever been denied in the quarter to which Roderick alludes, that the working of this motive should be unrewarded; it has only been contended there, that the amount and source of the reward were improper. The "self-interest" operatives should be remunerated, no doubt, in "honours," in "profits," or in any other moral or metallic currency which they choose; but that they should be invested with the power and an indemnity to put their hands in the pockets of persons for whom they do nothing, we most strenuously deny. Arming them with such unlimited authority, would not surely be to reward "self-interest," but to encourage its abuse. Roderick, indeed, candidly admits, and even advocates, this abuse of "self-interest;" for, he says, "he cannot but feel that, in the circumstance of the elections to hospitals, there are many evils; but, confining himself to the point which has attracted his attention, he thinks, as he has always thought, that much indiscriminate severity has been shown; for he questions whether the thing could or ought to be altered; his experience of the constitution of society making it appear that the acknowledgment of pure benevolence, and disinterested motives, subjects the individual (however really deserving) to general ridicule and distrust." This kind of reasoning to a man "who knows the world," may be intelligible and conclusive indeed; but, to a mere honest man, it seems exceedingly mysterious. How, at least, Roderick's "experience" could have brought him to believe that the "acknowledgment of pure benevolence" subjected the individual to ridicule, and that his own admission of the existence of gross abuses, accompanied by an objection to their removal, would not expose him to contempt, is to me incredible. Such an avowal is so extremely rare among men, and so contrary to the usual language of the "self-interested," that one does not know well whether to deal with its author as a knave or a fool. The boldness of the assertion places it still further beyond comprehension than the abstruseness of its meaning, and I should pass it over as containing some sublime secret too recondite for common understandings, but for the sensibility evinced towards the "evils of a necessary system." Previous advocates of bad systems rested their defence on their presumed perfections; Roderick far transcends his predecessors, by making the vices of a system the ground of its stability. The candid avowal of such abuse, accompanied by so obvious a desire for its retention, confers on him an originality in special pleading, not likely to be disputed by even the vilest of his patrons or contemporaries. In this rather infelicitous predilection, he resembles (he will pardon the simile for its precision) in taste, a certain caste of Africans, whose sympathy for filth, we are told, is so strong, or whose olfactory sense is so obtuse, that they preserve their dead in their habitations, by successively swathing the corse, as the oozing of putrefaction renders the operation necessary, until the foul exudations of the body, by gradual accumulation, at length fill the hut, and expel the living members of the family. The political structure intended for our accommodation has become so intolerable to its members, through the incrustations of time, and the progress of corruption, that it is no longer tenantable; yet, while our interests are roused by the inconvenience, and our senses shocked by the spectacle, Roderick plays the negro with our natural antipathies, and would feign reconcile us to these admitted abominations. His argument, indeed, seems to be precisely that which a maggot or a grub, if capable of expressing itself, would advance against the removal of the nuisance on which it fed.

But he cannot be serious; for a man who thinks rationally, and writes what he thinks, could scarcely have dismissed so important a subject with the levity evinced in the following passage:—"If this state of things, displeases those who are so anxious to see men as they ought to be, we must only refer them to the millennium, and be content for the present with things as they are!" What, if instead of being content with things as they are, the men who are anxious to see them as they ought to be, would turn their options into action, and instead of passively permitting the abettors of abuse to enjoy the profits of things as they are, would make them as they ought to be, and thus anticipate the prospects of the millennium! What a figure Roderick and his jests would make in the new system of things! The smile of malicious satisfaction with which he now gloats on the "system of evil" from which he derives his daily bread, would be as little protection to him and his partisans, as the smile of the hunter would be, when hunted in turn by the lion or tiger. That some retributive justice of this kind is in progress, Roderick is perfectly aware; and that it will succeed, the history of man establishes. Man, indeed, may be worried by a race of Nimrods for awhile, but he eventually learns the use of the spear, and turns on his pursuer. There is a stage in the chace of oppression, in which, endurance becoming intolerable, the oppressor generally becomes the victim of the oppressed; and if Roderick were only partially skilled in the "field-sports" of revolutionary controversies, he must perceive that the "lion is at bay."

I have thus, my dear Doctor, entered into a minute examination (and as some will, no doubt, consider an unnecessary one) of this strange doctrine, as it appears to be that which is now, and ever has been, advanced by those factions who make the profession of power a pretext for its sempiternal abuse. There is nothing easier than to do nothing; to preach that nothing can be done, is next, perhaps, to the facility of absolute quiescence. The introduction of such a stationary principle into the affairs of life is, however, as impossible as it would be productive of the most injurious consequences. It would at once supersede every improvement, and make every attempt at innovation a crime, in a being who has been endued with the means, and by a just inference, destined, to better his condition. But this argument goes to paralyse these energies, and tends to assail heaven itself through the necessary imperfections of man. Singular as this doctrine may appear, there is nothing new about it, save the effrontery with which it is put forward as a novelty. It is as old as our knowledge of man. His history, indeed, from the savage to his present comparative state of refinement, is but a narrative of a warfare of opinion on this very point, perpetually carried on between the adherents of existing systems, and the promoters of amelioration. In cookery and ethics, in costumes and constitutions, in science and religion, this constant struggle for the permanence of the present against a prospective order of things, has ever kept the world in a sort of moral insurrection. The first who projected those arts which Kitchener and Brummel have but just completed, were, if we are to credit historians, as strenuously opposed in their daring innovations, by epicures in raw flesh and patriarchal raiment, as the artificers of regular governments and codes of morality were thwarted in their laudable undertaking, by the amateurs of natural society, or lovers of "club-law." Nay, if we do not slight the oracles of holy writ, we are bound to believe that the endeavours of heaven itself to improve the condition of man, met with no better reception from the "Rodericks of the chosen people;" for while the *law* was delivering in thunder and lightning on the mount, the furnace was glowing at its foot, for the formation of false divinities. So is it precisely at the present hour; make a proposition as plain as thunder is audible, or as the lightning is visible, and there will be found men to deny its truth and utility. Touch but a fold of the idol by which they live, or which they have been accustomed to worship, and instantly you are pelted with the peculiar missiles of the sanctuary; approach, in short, but the gates of any one of these pagodas of corporate corruption, and forthwith you have the "sacred geese of the citadel" in a gabble about your ears, on the inviolability of the edifice.

But to what, after all, has this tenacity of antiquated institutes,—this "morbid sensibility" to the progress of innovation,—this vigilance of the sentinels of corruption, come to in the end? Has it stayed the march of improvement, silenced the voice of reason, or overawed the efforts of man to advance to that point to which he seems intended to arrive? No; revolution after revolution, in all the avocations of man, have followed in slow but certain succession; and though, in some places, he may have retrograded, yet a statistical glance at his present condition must convince the candid spectator, that this gradual pace of improvement places a splendid balance in his favour over any given period of his former history. If we are to judge of the future by the past, the tide which has rolled on through all time with so constant and irresistible a current, is not likely to be impeded by the "Canutes" of our medical corporations, who would cast chains on its course.

ERINENSIS.

Dublin, Sept. 30, 1829.

OBSERVATIONS ON IODINE, ERGOT OF RYE, AND QUININE,

By T. WETHERILL, M.D., *Liverpool.*

CONCERNING iodine, ergot, and quinine, you have already, from time to time, collected in the pages of your interesting work, much useful information; I beg, notwithstanding, to trouble you with this communication, in the hope that some of your readers are prepared to give additional evidence of their merits, through the medium of THE LANCET. It is with medicines as it is with other things; the surest way, perhaps the only one, and therefore certainly the best, to arrive at their comparative worth, is that of subjecting them to the discipline of the public pruning knife. The *fox-glove*, for instance, was at one time the constant theme of the most extravagant panegyric; it was said to cure nearly all diseases, until time and sad experience taught mankind differently. Let me not, however, be misunderstood. I have no serious charge to lay against enthusiasm; it has many redeeming qualities about it, and is generally the offspring of genius. When the character of a medicine comes to be overrated, there is little fear of the truth being undiscovered at one time or another; the disclosure, unfortunately, is often attended with one inconvenience; it is apt to bring on too great a reaction, which as often causes it to sink into unmerited disrepute. Ac-

cordingly, we find that many of those plants which were formerly held to be of great medicinal virtue, are now either totally neglected, or expunged from our dispensatories and pharmacoporas. The good have fallen with the bad. All men are not philosophers who are physicians and surgeons. From these premises it is fair to argue, that iodine, ergot of rye, and quinine, notwithstanding their value and present popularity, 'ere long may become neglected and unfashionable—*stat sua cuique dies*, is the language of the poet, and the irresistible law of matter.

Iodine.—Mr. Everett, p. 647, *No.* 312 of The Lancet, has clearly shown, in the treatment of a case of bronchocele, that iodine can be safely given internally to a much greater extent than has been commonly thought or practised. My own experience has long convinced me, that this medicine, given two or three times a day, in doses of from fifteen to twenty drops of the tincture (prepared from ten grains of the iodine to one ounce of spirit) may be gradually increased to one drachm, without any fear of injuring the constitution; but if given too largely at first, or if too abruptly increased from a smaller dose, it causes nausea, burning, or other disagreeable sensations of the stomach, vertigo, head-ach, &c.; in one case it produced pyrosis.

In dropsical forms of disease, iodine will be found a most valuable medicine. In several cases of anasarca of the lower extremities, attended with ulcers, phlyctenæ, &c., I freely administered the tincture; it invariably gave relief, and very frequently took away every vestige of the disease. For the ointment, prepared with one drachm of the hydriodate of potash to one ounce of hog's lard, applied assiduously to the part, accompanied by friction, and the internal use of the tincture, in dropsy of the ovaria, indurations and enlargements of the mammary, thyroid, and other glands, I know of no medicine of equal efficacy. I have treated asthma by large doses of the tincture with the best results. At present I am using it conjointly with an ointment made of the sulphate of zinc three ounces, hydriodate of potash one drachm, and spermaceti one ounce, spread on lint and applied to the ulcers, for one of the worst and most interesting cases of ulcerated legs I ever witnessed. The result of this case, of which I have taken a drawing, shall, in due time, be communicated to the public.

Ergot of Rye.—"What do we owe to American physicians and surgeons?"—was the taunting and sarcastic language made use of, some time ago, in *The Edinburgh Review*. It is now, however, no longer a matter of inquiry, much less of surprise, to the rest of the world, whether the United States of America are possessed of physicians and surgeons, whose talents and enterprise justly rank them with those of any country. I dislike to compare the capacities and capabilities of different individuals; it is an invidious task, and seldom, if ever, leads to any thing definite or profitable, or I am sure it would not be difficult to mention the names of several American physicians and surgeons, viewed either as writers on, or as practitioners of, medicine, at present in the full vigour and pursuit of their professional avocations, whose researches and abilities would lose nothing by being compared with those of the most distinguished of the faculty in any part of Europe.

The use of ergot, in hastening the process of labour, was originally made known to the public by a citizen of New York, Dr. Stearns. It was Dr. Hosack, my late preceptor, of the same city, who first suggested its use, and gave the ergot to arrest uterine hæmorrhage. It has been said, that the *candle* was originally lit in Italy, but if so, why was its light kept under a bushel? The value of this medicine is now well known not to be confined to the influence which it is capable of exerting over the parturient uterus. Dr. Hosack anticipated this; the writer has heard him, in his usual eloquent and energetic style, declare to his pupils, that ergot, at no distant period, would be considered a most important article in the *materia medica*. The pages of every medical journal now abound with testimony of the truth of what he then said. In a letter, dated June 2, 1822, which he addressed to Dr. Hamilton, of Edinburgh, he says,—"By its active operation upon the womb, it promises to be very extensively useful in counteracting many morbid conditions to which that viscus is liable, especially those proceeding from an inactivity in the muscular powers of the uterus, or a lax state of the vessels. Under the former head may be noticed the retention of the placenta, and the disease called physometra. Under the latter are, excessive discharges of the lochia, fluor albus, and those uterine hæmorrhages which proceed from, and are continued by, general and local weakness." Again, in the same communication, he observes,—"Seeing these effects of the ergot in producing uterine contraction, and in checking hæmorrhage, it has occurred to me, that it promises to become a valuable medicine in those cases of uterine hæmorrhage which proceed from an attachment of the placenta to the neck and orifice of the womb." Dr. H., in his letter, relates a case of uterine hæmorrhage. The patient was a lady about fifty years of age; he gave her the ergot, in substance of ten-grain doses, with the most decided benefit, when other means had been tried in vain.

Having thus been early impressed with the value of this medicine, I did not hesitate to test its efficacy at the first opportunity. I have given it in numerous instances during the last five years, not only with the view of assisting the process of labour, but also to arrest uterine hæmorrhage, and have, almost uniformly, received from it the most encouraging results. In two very recent cases of flooding, the consequence of a miscarriage of about two months, it proved to be of signal service. The patients, when I was first called to them, were both in extreme danger; I therefore instantly decided upon giving the ergot, being persuaded (*transfusion* apart) no other means would save them from sinking. It staunched the hæmorrhage, in both instances, almost immediately. One of the patients exclaimed, when she was able to speak audibly, "Those powders have saved my life."

I have usually given the ergot in substance, in doses of from ten to twenty grains, repeated every half hour, or oftener, as the case might require, blended with treacle, or with some common housewife preserve. I have not repeated this medicine more than three times, with two exceptions, in any one instance without effect; and in no instance have I perceived any bad consequences with which it could be charged. In two cases where it was given to hasten the completion of labour, it certainly failed. This proves little or nothing; the medicine might not have been genuine; or, which is as likely, these were examples of those anomalies occasionally met with in the practice of medical men, which refuse submission to any known rule of treatment.

Sulphate of Quinine.—I have treated two well-marked cases of *tic douloureux* by quinine, in doses of from five to ten grains, taken two and three times daily. The paroxysms of the disease, in one of the patients, (a delicate and well-informed female,) appeared every day at one P.M., and lasted with great severity until four in the afternoon. On the third day after taking the medicine, the complaint of this patient had totally disappeared. In the other, the cure was not quite so complete. I have also given the quinine for headach, the "*periodical*" of authors, and, in some very distressing attacks of toothach, with much advantage.

Liverpool, Sept. 25, 1829.

P.S. I have just received news of the death of the woman on whom I operated in May, 1828, for scirrhus uteri; a report of her case you inserted in the 257th No. of The Lancet. She sailed for Boston (America) in July of the same year, and reached that place without experiencing any thing particular during the passage; but soon after she had arrived there, she was attacked, as I had anticipated, with symptoms of phthisis pulmonalis. Her husband, on whose word little is to be depended, states, that she felt, for some time before her death, much pain in the region of the womb, and apparently, for it is difficult to understand the meaning of his letter, he is inclined to think her life was shortened by a fresh attack of her old complaint. I should be very glad to have an account of the *post-mortem* examination; and as The Lancet is extensively circulated in *America*, perhaps the medical gentleman who had the management of her case there, should he see this, will have the goodness to communicate it to you, or to me, through your publication?

SULPHATE OF QUININE IN INTERMITTENTS.

By William Thomas, *Esq., M.R.C.S.*

The following brief but well-marked cases, showing the efficacy of the sulphate of quinine in intermittent diseases, deserve to be recorded:—

Mr. J. H., aged 50, applied to me in January last, for the cure of a quartan ague, which had continued from the preceding autumn. He had tried all the remedies in general use, without benefit, before I saw him; I therefore commenced at once with the sulph. quinine, giving a grain every three hours between the paroxysms. The first mixture checked the disease, and he had no fit after the second bottle. To ensure success, I continued the remedy at more remote periods for ten days longer, by which the disease was entirely eradicated.

J. R., a labouring man of good general health, was attacked last spring with a neuralgic affection of the right side of the face, observing an intermittent type. The paroxysm would commence daily about two o'clock in the afternoon, lasting for four hours, during which, the pain was most excruciating. Fancying the distressing symptoms might have arisen from derangement of the digestive organs, I prescribed aperients, which, with calomel and opium, blisters, and a long list of other remedies, proved totally ineffectual. I then ordered the following:—

> *Sulph. quinine*, six grains;
> *Water*, six ounces;
> *Sulphuric acid*, five drops. Make a mixture.

Of this mixture, two table spoonfuls were taken every four hours during the intermissions, and I had occasion to repeat the quantity only twice, before the man was at his daily employ.

Pembroke Dock, Sept. 26th, 1829.

CASE OF A CHILD WHO HAD SWALLOWED A PIECE OF GLASS.

By Mr. Chilcote, *Surgeon.*

A fine child, about four years of age, residing in Monmouth Court, Whitcomb Street, Haymarket, was attacked, during the past week, with small-pox. On Monday last, it having become necessary to give an aperient, a wine-glass, containing a portion of a purgative mixture, was placed to his mouth. The little patient being at the time in a state of delirium, a piece was bitten out with great violence, and swallowed. The distress of the parents at the occurrence of this unfortunate accident, may be easily imagined. On Thursday evening, (the patient having been also seen by Mr. Jewell,) after the exhibition of an aperient, and to the great surprise and satisfaction of all, a dark-coloured and copious evacuation from the bowels took place, and the piece of glass was found in the fæces. It measures exactly one inch in length, terminating in a point almost as sharp as that of a penknife, and about half an inch in width, one of its sides also having a point exceedingly acute. During its passage through the alimentary canal, there was no uneasiness or pain, except what was necessarily produced by the operation of the medicine. The child is doing well.

4, Great Pulteney St., Golden Square,
September 28th, 1829.

BRITISH COLLEGE OF SURGEONS.

To the Editor of The Lancet.

Sir,—I have been a practitioner in medicine and surgery upwards of twenty years, but I have never chosen to obtain the sanction of any of the corporate bodies for that purpose. I have adopted this line of conduct upon the fullest conviction, that there is not a corporate body in the United Kingdom to which it is not discreditable to belong; they, one and all, have for their sole object the acquisition of wealth, and that by means the most unfair and dishonourable. In confirmation of this opinion, I have only to refer to the pages of The Lancet, in which you have so ably exposed the selfishness and infamous chicanery of these monopolists. In those pages will also be found a proposition for putting down all these nuisances, by the formation of a national college of physic and surgery in their stead; but as the plan did not appear, at the time, to fall in with your views, I forbore to press it further upon you.

I have learnt, with the highest satisfaction, that it is in contemplation to form a new college of surgeons upon liberal and enlightened principles, but I deeply regret that its views are not more extensive. Nothing can be better devised than the manner in which it is purposed to examine candidates for diplomas; but why confine these examinations to diplomas for surgery only? Is not this still to keep up that injurious and injudicious distinction between medicine and surgery, which does not exist in nature, and which, probably, would never have existed at all, but for the pride and indolence of our university M.D.s.

Nature, and the very constitution and wants of society, require that the great body of practitioners should practise both medicine and surgery. That a national hospital for the acquisition of both, and a national college to examine all candidates for admission into the profession, are imperatively demanded, is self-evident; for if the preservation of life and health be a matter of national importance, it is but just and expedient that the nation should provide a suitable establishment for the education of those to whom the preservation of life and health is entrusted. I shall not here dilate upon the advantages which such an institution would possess over our eleemosynary foundations, which were never designed by their projectors for schools of medicine and surgery, and for which they are altogether inadequate, but shall proceed to submit to the consideration of the members of the British College of Surgeons themselves, and to the profession at large, the following propositions:—

1st. That the British College of Surgeons exchange its title for that of the National College of Physic and Surgery; and that the examiners take upon themselves the extended powers in the examination of candidates for diplomas, which such a change of title implies.

2d. That the members of the British College of Surgeons, and the members of the profession at large, unite in a petition to parliament for the erection (in London) of a national hospital, capable of containing, at least, 2000 patients.

3d. That to such hospital, professors, physicians, surgeons, &c., be attached, (with adequate salaries,) whose time and services shall be *exclusively* devoted to the instruction of the students, and the cure of the patients *within* the hospital.

4th. That students be admitted to the different lectures, and to the practice of the hospital, upon the payment of a moderate premium, or gratuitously, as may be deemed most expedient.

5th. That persons shall still be at liberty to study their profession, when, where, and in whatever manner they may think proper; but that, from and after any certain date, no one shall be permitted to practise medicine or surgery, without first obtaining a diploma

from the National College of Physic and Surgery.

This, Mr. Editor, is the outline of a plan, which, through the medium of your widely circulated Journal, I wish to submit to the consideration of the medical world. If carried into execution, it would, in my humble opinion, not only rescue the profession from the deplorable state of degradation into which it has been plunged by the selfishness, ignorance, and perversity, of our chartered monopolists, but also raise it to that exalted station which, by its vast importance, it is entitled to possess.

Until this happy change be effected, I must, at all risks, continue,

AN UNLICENSED PRACTITIONER.

LONDON HOSPITAL.

To the Editor of THE LANCET.

SIR,—You would oblige me by inserting the following paragraph in your valuable periodical. It is given out in the advertisements of the medical school at the London Hospital that Mr. Headington was going to lecture there, on Surgery and Anatomy. It turns out that he will give no regular course whatever, but will take it in turn with Mr. Luke. Had I been aware of this clap-trap, and of the real arrangements of these gentlemen, I should have acted differently to what I have done. I am, Sir,

STUDENS.

MIDDLESEX HOSPITAL.

To the Editor of THE LANCET.

SIR,—Among your notices to correspondents in THE LANCET of September 26th, I observe one particularly addressed to pupils and strangers in London, which, on account of its misrepresentations, and its liability (more particularly at this time of the year) to injure the medical officers of the Middlesex Hospital, attracted my attention. It runs in these words: "The Middlesex Hospital is nearly the worst in London for students, the rules of the governors not admitting an attendance of more than four hours and a half in each week." This assertion, from experience, I can prove to be false. The pupils are permitted to accompany the apothecary round the hospital at ten o'clock; the physicians are occupied in seeing the patients from twelve till near two. Besides the regular hours of instruction, the student may have free access to the wards at other hours, as long as this *privilege* is not abused. The case books are open for his inspection, and from them extracts are allowed to be made. The regulations of post-mortem examinations are as liberal as those of other hospitals. Clinical instruction is given upon every interesting case; and I have no doubt that you, Sir, as a lover of truth, will, by giving an early insertion to this, rectify the error into which, I feel convinced, you have fallen through misinformation alone.

I am, Sir,
Your most obedient servant,
THOMAS WRIGHT.

4, Portugal Street, Grosvenor Square.
October 1st, 1829.

ROYAL WESTERN HOSPITAL.

EXTRACTION OF THE BREECH-PIN OF A MUSKET FROM A BOY'S ORBIT.

GEORGE AGATE, 18 years of age, presented himself at the Royal Western Hospital, on the 20th of June last, with a scar about an inch and a half in length over the right eye, and a piece of iron protruding through the integuments of the upper lid; the eyelids were closed. He stated that on the 27th of last February he was shooting with a musket loaded with a double charge, which burst when he fired it, and he believed that the piece of iron now protruding through the eye-lid, was the breech-pin of the gun, as it had never been found. He became insensible immediately after the accident, and continued so for several days; that some brain and several pieces of bone had escaped from the wound, which afterwards gradually healed, leaving no part of the iron visible. It had, however, lately descended, and appeared through the integuments of the upper eyelid. It caused him no pain, but he felt as if some heavy body were in his eye; his health he stated to be good.

He was examined by Mr. Truman, who found, with the aid of a probe, that a massive body occupied the orbit, a very small portion of the surface of that body being exposed, as was before said, through the upper lid of the right eye. Little pain, and no nervous irritation were excited when it was moved with the forceps. On raising the lid, no part of the eye was visible, but a mass of irregular granulations appeared to have taken the place of the cornea, and anterior surface of the sclerotica. Mucus was constantly discharged from between the eyelids. It was determined to extract the foreign body; and Mr. Truman performed the operation on the 22d of June, in the following manner: he introduced a director at the opening through which the surface of the foreign substance appeared, intending that its point should

come out between the eyelids, at their inner junction; this, however, he was not able to effect without cutting down upon the point of the director, through the granulations which had grown over and confined the foreign body; and now, as they were also attached to the under surface of the upper eye-lid, impeded the passage of the director. Having done this, he divided the portion of the eyelid which laid over the director. An assistant then raised the outer flap with a pair of forceps, and with another pair of forceps, Mr. T. took hold of the foreign substance and freed it, by dissecting through the granulations, and after moving it about a little, succeeded in extracting what proved to be the breech-pin of the gun, weighing *two ounces* and *five grains*. There was slight hæmorrhage from a vessel in the orbit, which, however, was arrested by pressure with the finger. The edges of the wound formed by the division of the upper lid, were now brought together, and kept so by strips of adhesive plaster; over them, simple dressing, and a pledget of lint were applied, to be kept moistened with the following lotion:

Spirits of wine, two ounces;
Water, one pound.

23. Slept well during the night; no pain; pulse 86.

25. Skin rather hot; bowels confined; ordered a dose of house medicine; the wound dressed, which looked healthy.

26. Bowels opened; wound occasionally dressed till the 8th of July, when he was discharged cured, at which time a part of the cornea lucida could be seen; and though he could not then distinguish light from darkness with this eye, a gentleman who saw him last week states that he can now do so.

As it was doubted that some portion of the brain had escaped, Mr. Truman applied to Mr. Peter Eversbed, of Billinghurst, in Sussex, (under whose care the lad was first placed,) for information, who gave the following particulars:

"February 27th.—I was this morning called to attend on George Agate, who was suffering from a lacerated wound and fracture, in the lower part of the os frontis, occasioned by the bursting of a gun.

"There was a considerable discharge of blood from the wound, mixed with brain, and the right eye was forced from its socket; on closer examination of the finger, I discovered and removed two loose portions of bone, one on each side of the wound, replaced the eye, which was lying out of the socket; dressed the wound with dry lint, and a bread poultice over it.

"The wound is supposed to have been caused by the breech-pin, but it has penetrated too far to be discovered without using more force than I think proper.

"Immediately after removing him, he was seized with general convulsions, at which time light-coloured blood was discharged freely from the wound, with portions of brain, in all I think about a teaspoonful (independently of what came away before).

"Prior to this, the mental faculties were but little affected, except that there was a dulness; the convulsions continued an hour, so strong, that two men were required to hold him; he then fell into a state of stupor, with occasional convulsions, until midnight, when his mother arrived, whom he immediately recognised.

"28. To my surprise, I found him this morning tolerably sensible, exhibiting only a little dulness, which, however, did not amount to stupor. He was slightly convulsed; the palpebræ of both eyes quite closed; he complained of scarcely any pain; pulse even at 90; little thirst; head rather hot; any noise, or jarring of the room, gave pain; about a teaspoonful more brain came away in the dressing; the wound looks dark, from the gunpowder; no appearance of more loose portions of bone, nor of the breech-pin.

"29. Convulsions gone; more sensible; wound suppurating; from this time he has gone on without an untoward symptom; at the end of ten days, the breech-pin descended so as to be visible, and easily moved up and down."

MEATH HOSPITAL.

LARYNGOTOMY — ADVANTAGEOUS USE OF THE STETHOSCOPE.

On Saturday, the 5th instant, Dennis Toole, ætat. 12, an intelligent boy, of a robust habit, was brought to the Meath Hospital and County Dublin Infirmary, by his father, in consequence of his having swallowed, on the Wednesday before, a plum-stone, through a hole in which he had been whistling, after having removed the kernel from it. The boy seemed to suffer but little inconvenience, except at intervals, when he was a good deal distressed by fits of suffocative cough. He was able to run about and occupy himself as boys at his age usually do; his countenance, however, was bloated; pulse 106; skin cool; did not complain of pain on deglutition; he said, that during the cough he suffered pain in his throat, but that only when the paroxysms were severe; he also complained of pain at the ensiform cartilage. His fits of coughing, which were evidently becoming more frequent, had not evinced croupy sounds, but resembled those of emphysema of the lung, or of suffocative catarrh; they were followed by an expectoration of white frothy mucus.

Mr. M'Namara, to whom the case belonged, reported that the pharynx was slightly inflamed, (some efforts had been made by a friend of the patient's to induce vomiting by irritating the throat,) that the chest sounded clear on percussion, and that the respiration was natural, excepting a slight sonorous roll in the upper portion of the lungs. The boy was able to make a whistling noise, audible at a considerable distance, whenever he pleased, in expiration, but not during inspiration. From this view of the case it was declared, that the stone was most probably fixed in the upper part of the trachea, and that possibly it rested with an extremity in either ventricle of the larynx; at all events it was evident, that its apertures corresponded with the rima glottidis.

The operation of laryngotomy was therefore performed, and an incision of nearly an inch in length was made into the larynx and trachea, the centre of which was the crico-thyroideal space. Immediately before the commencement of the operation, the boy was directed to whistle through the stone, which he did audibly. The trachea having been opened, a full-sized flexible catheter was introduced through the wound, in order to dislodge the foreign body, and press it into the pharynx. This, to all appearance, was effected, for the boy lost the power of whistling through the stone, though the wound in the trachea was accurately closed whilst he was making the effort; the suffocative cough also disappeared, and he declared that he swallowed the stone. The bleeding having ceased, he was put to bed, where we saw him perfectly tranquil, with his pulse 90, and his respiration natural; in short, he was completely relieved; the only anxiety he seemed to experience, arose from the loss of his voice, which he was apprehensive he never should recover. Nothing remarkable occurred in his case for eight days, he took some mild aperient medicine, and his stools were narrowly watched: the stone, however, did not make its appearance.

On Saturday, the 13th instant, Mr. M'Namara, who had been examining his respiration with the stethoscope every day, declared that the right lung was not distended with air, whilst the respiratory murmur on the left side was more audible than natural, in a person even of his age; he stated, also, that the right side of the thorax sounded clear on percussion: from these circumstances, and the stone not having been found in the stools, it was declared to be lodged in the right bronchus, a situation, however, which it did not occupy long, for in a few minutes afterwards he found it moving in the trachea. These phenomena determined him to dilate the wound in the trachea downwards, which was done on Wednesday the 16th instant, one fortnight from the day of the reception of the stone, when it was forced out of the wound in a fit of coughing; since then, the boy has remained perfectly well. The only medicine he took was two grains of calomel on the night of the operation, and six days from thence, the wound in the trachea was closed, the superincumbent granulations having prevented the passage of the air through it.

From the foregoing hasty sketch, the following conclusions may, perhaps, be correctly drawn:—1st. That the stone was fixed in the upper part of the trachea, or larynx, and, probably, that it rested across the latter, with perhaps an extremity in either ventricle; 2dly, That when the catheter was passed through the rima, it turned the stone upon its axis, so as to cause it to present an edge upwards and downwards, instead of its flat surfaces, which being perforated, allowed the boy to whistle through them whenever he pleased before the operation; but when turned, the apertures not corresponding with the rima glottidis, he was incapable of doing so; 3dly, That a fit of coughing, or some other exertion, caused the stone to change its position, when it was distinctly heard in the trachea, producing that peculiar noise, that "rouflement," which any one who has ever heard, could not possibly mistake. Indeed Mr. M'Namara seemed to appreciate very justly the advantages afforded him by the stethoscope, inasmuch as he declared repentedly, that were it not for the aid of that instrument, he should not have felt himself justified in dilating the wound, seeing that he could not have declared as positively as he did, that the stone still remained in the trachea, in the absence of all those symptoms which one would suppose a foreign body in such a situation would give rise to; but the absence of which is possibly easily explained, by the stone having been fixed before the operation, and by there being two openings in the trachea afterwards, when it would be impossible for the foreign body to obstruct respiration, seeing that the plum-stone (though a very large one) could not close both apertures at once.

It must be obvious how much science has been benefited by the introduction of the stethoscope, when we see how it enables a surgeon to anticipate those symptoms, the existence of which, previously, would be deemed necessary in order to justify the operation; but which, seeing that they are the result of inflammation, must render the operation of tracheotomy much more dangerous than a review of the foregoing case would lead us to conclude.

THE LANCET.

London, Saturday, October 10, 1829.

SUPPOSE Hippocrates were to revisit this world, and that the honour of introducing him to our various medical institutions, were conferred on Doctor James Johnstone, late conductor of the deceased quarterly Medico-Chirurgical Review; the ex-editor would, doubtlessly, avail himself of so favourable an opportunity for the indulgence of his ancient habits, by entertaining the resurgent sage with one of those panegyrics on our medical establishments, with which he was wont to eulogise them during his distinguished literary career. After a glowing sketch of the general character and superiority of our medical policy, he would proceed to a detail of each part, and conclude by directing the attention of his venerable companion to the perfect harmony and admirable fitness of the whole system. Approaching the portico of that model of corporate perfection in Lincoln's Inn Fields, the very sight of a structure whose ordinances have obtained so much celebrity, would awaken all his former sympathies, and, rising in sentiment with the dignity of the theme, the Doctor would exclaim, "Father of medicine! behold the place in which those of our youth, who produce 'certificates' of attendance on the discourses of our ablest philosophers, 'certificates' of having gone through a regular course of lengthened study, and 'certificates' of having arrived at that mature age, before which it would be unsafe to permit them to feel a pulse, and impolitic for them to touch a fee,—are subjected to a rigid examination in all the medical sciences, by a court specifically appointed for this important purpose. To ensure, illustrious sage, the validity of the testimonials, let me assure you, that none are received as genuine by that court, but those which have been signed by professors appointed by the examiners themselves; and, oh! Venerable being, to secure their own competency, their independence, and a faithful discharge of their duties, these examiners have been invested with the exclusive power of choosing the members of their own body, none others being deemed capable or worthy of performing this sacred trust. So great, Sire, are the benefits thus generously conferred on the profession by this tribunal, and so upright are its institutes and decisions, that I can give you no livelier idea of its virtues, than by comparing it with your own Areopagus, from whose judgments, for five hundred years, neither plaintiff nor defendant was known to appeal."

The Doctor would then most probably call the attention of his ghostly visitor to the public hospitals of the metropolis, and dwell with patriotic rapture on the excellence of their constitution. With the pile of St. Bartholomew's in view, he would address his follower thus: "Son of Esculapius! In these magnificent establishments, Science has become the handmaid of Charity, and each derives advantage from their felicitous union. Endowed by philanthropic individuals with vast revenues for the relief of those who are otherwise unable to procure the assistance of our divine art, these charities are placed under the care of the highest of our nobility, and the wealthiest of our merchants; the rank of the former, and the habits of the latter, fit them both, for the discharge of their important duties,—duties which consist in fulfilling the intentions of their founders, and in regulating the appointment of the surgeons and physicians of these benevolent establishments. So disinterested is the zeal of themselves and their agents, that the labours of the whole are performed without charge: content with the approving consciousness of their conduct, they seek neither fee nor reward. But the relief of sufferers is not the only

good. These institutions serve another and scarcely less important end: they are alike devoted to the improvement of science, and the education of our practitioners for their public duties. Observe with what avidity the crowds of students pursue the medical officers, and seek for information; with what alacrity it is communicated; how inimitable are the arrangements calculated for this end; how like the noble example of your Socrates, the gratuitous instructor of his philosophic followers! Here, indeed, may the peripatetic system of education be said to have arrived at its *acme* of perfection, and the 'ire pedibus in scientias' to be no longer a jest. By a prudent regulation of the body, whose merits I have just endeavoured to describe, all the rising generation of our profession are concentrated within a few metropolitan establishments of the same kind, that they may equally drink from those pure fountains of knowledge, which the muddy springs of the provinces are inadequate to supply. In the books which you see in the students' hands, are the symptoms and treatment of each case deposited, and these become a source of invaluable reference to the pupils, and texts for the discourses of their preceptors. How splendid an example of that inductive philosophy, which is so honourable to modern times! You cannot, therefore, fail, venerable Sire, to perceive the superiority of this system over that which prevailed in your own age, when the improvement of medicine in part depended on those casual records of disease and cure, suspended by the patients themselves, in the temples of the deified founder of our family, the great Esculapius."

Struck by the plausibility of the oration, the Coan sage might desire to become more minutely acquainted with the practical operation of a system, which, in theory, wore so promising an aspect. Opportunities for this purpose could not long be wanting. His attention would first be attracted by the election of a member of the impeccable council; the qualifications are only equalled by the number of the candidates for the important office. One is the apprentice of a member; another the nephew; a third, a matrimonial connexion; a fourth, a favourite for his principles; a fifth, one whose intellectual are inferior to his pecuniary acquirements, raises himself into favour by throwing his purse into the breach which innovation was making in the Doctor's beautiful "system;" while all are remarkable for their subserviency to the conscientious electors, and for nothing else. The other class of competitors comprise a miscellaneous group, possessing various talents, but some of them unfortunately distinguished, by public report, for their hostility to the "system," and their fitness for the duties of the vacant situation, of which they had imprudently given early and indisputable testimony. "Which," inquired Hippocrates, of Edmund Belfour, "which of the candidates has been honoured with the vacant place in your surgical Areopagus, as this gentleman, Doctor Johnstone, has been pleased to designate it?" "Why, the nephew of the great Sir Astley," replies the secretary of the council, swelling with the importance of the response. "What!" replied the astonished sage, "the nephew of an Areopagite selected in preference to him whom all looked upon as best adapted for the office? But I presume my guide, the eloquent Doctor, will be able to explain this mystery of *hereditary* talent, a descent which we were wont to doubt in Greece."

His curiosity leads him next to attend an examination of a licentiate; the candidate produces all the required credentials, and answers the questions proposed to him with a facility which, to the illustrious, but innocently ignorant, spectator, seemed surprising. To his still greater amazement, he finds that the "member" is, not long afterwards, brought before one of the legal courts of the country, on a charge of ignorance of

the distinguishing qualities of a flint and a patella! "But I suppose," ejaculates the wonder-struck philosopher, "my friend will readily satisfy me on this point too." An extraordinary case occurs some time after in one of the great hospitals which he has visited. He is anxious to learn its history, and, entering the ward, inquires of one of the Doctor's "peripatetics" for the patient; but the pupil knows not that there is such a case in the house. "Mi Hercule!" cries the sage, "this ignorance is beyond comprehension; but the Doctor will no doubt be able to throw light on the subject." Observing some irregularities in the treatment of the inmates, he ventures to inquire of the janitor for some of the "noble" governors by name. He is informed, that one of them is spending the winter at Rome; that another is on an embassy to China, and that a third has just sailed for the Canaries, to die of consumption; others are "up" or "down" at their country seats on hunting excursions; and all the "wealthiest of the merchants" are so deeply involved in a "panic" on the Exchange, that they have no time to attend to the aches or pains of hospital patients. "Were it not for the Œdipean powers of the Doctor," exclaims the sage, stroking his flowing beard, "in reconciling mysteries, I should despair of ever learning how a man dying on the ocean, or hunting on the downs, could attend to the duties of the governor of a hospital in London." He waits until an election for a physician to one of the hospitals occurs. Among the various candidates, there is one, an Oxford Doctor, who, from the celebrity of his "Alma Mater," and the multiplicity of titles appended to his name, Hippocrates has no doubt will be elected: for once he is not disappointed. Excited by the circumstance, he goes to witness the practice of one from whom he expects so much; "the man of titles" is in the act of lecturing his class on a case of peritonitis, and the words "quality of the pulse, tenderness on abdominal pressure, and characteristic expression of the features, leave no doubt of the true nature of the disease," fell on his ear. The next day it is whispered, that the "peritonitis" had spontaneously resolved itself into a case of parturition. "By all the gods of Samothrace," exclaims the enraged philosopher, "the 'system' must be a delusion; not even this 'Johnstone' himself, were he Œdipus, can longer reconcile me to these paradoxes, or satisfy me that his favourite scheme is not as baneful in practice, as he has made it specious in description; like that peculiar fruit on the shores of the dead sea, all beauty to the eye, and all bitterness to the taste."

A LETTER, contradictory of the statements which we have deemed it our duty to make on the disadvantages of the Middlesex Hospital, will be found at page 77. As the communication is signed by a gentleman who professes to have experienced the benefits afforded by the institution in question, we readily insert it. At the same time, we think it right to reiterate all that we have said on the subject, our information having been obtained from the "prospectus" of the University, from the "established laws" of the governors, and from the secretary, Mr. Shedden, who expressly stated that the physicians and surgeons attend from half past twelve to half past one; and the "order" of the governors authoritatively insists that "no pupil be *admitted in the wards* of the hospital, but at the *stated hours* of visiting by the officers of the establishment, and that *no pupil or dresser* be ALLOWED TO REMAIN in the hospital, after the usual business of the day is finished." This "order" is signed "Alexander Shedden;" and unless it can be shown that we have forged this document, the eulogists of the hospital had better remain silent, for they will gain little by discussion. Our correspondent speaks of the "*injury*" to the medical officers, "particu-

larly at this season of the year;" yes, at this season of the year, when filching-traps are laid for the unsuspecting medical student, at the corner of almost every street. But how "injured?" Are they not "gratuitously-attending, science-loving" physicians and surgeons, and are they not *advertised* in the hospital pamphlets as discharging the whole of their hospital duties, "without fee or reward." Heaven be praised! The *thing* is *working*. Every branch of the vile sink of corruption, engendered by knavery and "charitable" cant, is in a state of fermentation. Woe to the dregs!

A REPORT of some proceedings which occurred at the Sutton Street, or Nevey's Theatre, a sort of fungus which sprang up from the hot-bed of hospital contention in 1826, deserves the attention of the profession, and more particularly of that portion of it which consists of medical students. It was only last week that we spoke of the "expelling" of pupils from Guy's Hospital, if they happen to be too attentive, and to be suspected of reporting the cases from that nest of "hole and corner" surgery; and this week we have to record the fact, that one of the lecturers, Bransby Cooper, seized a pupil by the collar, and dragged him from his seat, merely because the gentleman rose to answer a question which had been put by the person occupying the Chair. This is one of the grossest outrages we ever heard of, and had Bransby Cooper been severely chastised, he would have received only a just punishment for his unwarrantable violence. Even the steward, Browell, it will be seen, declared that he would not hesitate to order any pupil to be "*turned out.*" When the pupil rose to answer the question which had been proposed, Mr. Key, in a mandatory and insolent tone, declared that "he would hear no observations on his conduct, whilst he should fill that chair." Indeed! Who is Charles Key? And what is his "chair," of which he boasts. Why Charles Key is the son of a respectable apothecary, who had the sagacity to apprentice the hopeful youth to one of the surgeons of Guy's Hospital; the term of Charles Key's apprenticeship having expired, and having, by marriage, become the nephew of Sir Astley Cooper, he was, "*in turn*," elected to the office of surgeon; and a disgraceful squabble occuring between the surgeons of Guy's and the surgeons of St. Thomas's, about the buying and selling of some human flesh and bones contained in St. Thomas's museum, a division took place, and hence arose the "opposition school" in Sutton Street, where Mr. B. Cooper now indulges his pugnacious propensities. A theatre which, although built upon the public hospital foundation, Mr. Harrison tells us, in his evidence before the Anatomy Committee, "has been paid for in part, and is intended to be wholly so, out of the profits of the surgical school;" that is, the pupils are to pay for the erection of a place, in which they are to be beaten and spit upon at the pleasure of the lecturers. A hopeful state of things, truly! Here, then, we have something of the history of Mr. Key and his theatre. But what of his "*chair!*" Why, estimating its price by the value of its contents, it probably cost a few shillings at a Jew-broker's. For certain it is, that this "chair" is no test of merit. It was not obtained by Mr. Key, through any display of professional ability. It was not awarded as a prize for any triumph achieved over contending competitors. He may well cease this boasting then, for he may rely upon it, there is no more honour attached to its occupation than filling any chair in any shop in the Borough. Mr. Key occupies his chair to dole out his wares to his customers; the shopkeeper does the same thing. Hence their equality in office, if not in talent and civility. The proceeding of Tuesday even-

ing fixes the character and determines the fate of this school, for no student will enter to it unless he be the meanest and most spiritless mortal that ever disgraced the form of man. The entire class has been seized by the throat, has been dragged, has been shaken; and what apology can be deemed an equivalent? We are told that ruffians and bullies attended from the brothels in Kent Street, to overawe the students on this occasion. But if the ruffians can intimidate the pupils when *in* the theatre, they can have no control over them whilst *out* of it. And where are to be found those young men who, at a pecuniary sacrifice, will seek to be assaulted and despised. Assaulted the pupils have been, and, if they tamely submit, despised they must be; for they will only be known by the designation of "Sutton Street slaves."

DEATH OF MRS. PHILLIPS, OF FINCHLEY.

THE LANCET was the first journal that pierced beyond any portion of the veil which hung over this mysterious and appalling catastrophe. At the outset, we did not hesitate to declare that the matter could not terminate with the inquest, and that the interference of the magistrates was imperiously called for. Public justice re-echoed the demand in a voice of thunder, but what has been the response of its ministers?—"*Etiquette* forbids!"

The analysis of the mixture alleged to have been taken by Mrs. Phillips, exhibited *twelve grains* of *solid opium* in each dose! Twice was this medicine taken, without producing even stupor; but the third dose, we are told, produced the sleep of death! What think you now, ye magistrates of Bow Street? Was the inquest a "*competent*" tribunal?

The conduct of Mr. Snow has been manly, discreet, and generous; and he has completely succeeded in exonerating Dr. Tweedie, and Mr. Hill, the assistant, from any charge of unskilfulness, or neglect.

Introduction to the Science of the Pulse, as applied to the Practice of Medicine. By JULIUS RUCCO, *M. D. &c. &c.* London, 1828. Burgess and Hill. Royal 8vo. 2 vols., pp. 802.

A RATIONAL, systematic work on the pulse, has long been a desideratum in English medical literature. It is with feelings of disappointment, then, that we find a book with so many pretensions as the one now before us, should be so very far from supplying the deficiency. Not only is the small quantity of information which it contains, obscured by a heavy, verbose style, by bad grammar and worse composition in every page, but it is mixed up with gross physiological errors, and with absurd and fanciful assumptions, put forth with all the gravity of established and important facts. This is a heavy charge, but our readers will presently see that it is but too well founded.

The first volume is occupied by a long preface, containing general observations on, and a history of, sphygmica, or the science of the pulse; and by a detail of its general principles.

In the most ancient periods, as at present is the case in the half-civilised empire of China, an undue preference was given to the pulse above every other means of investigating the nature, and predicting the termination, of diseases; as a more obvious and accessible means of diagnosis, and being less dependent on anatomical knowledge, it presented many inducements to the confidence of the physicians. But as the science of medicine advanced, and especially after the discovery of the circulation, it lost much of its imaginary importance; and although it has never ceased to be resorted to by medical men, less reliance has, perhaps, since been placed on it than it deserves. This may be owing to the exorbitant value at which it has been estimated, and the fanciful theories which have been started by most of those who have written expressly on the subject, from Galen downwards, to the more modern authors, Solano, Borden, Nihell, Cirillo, and Fouquet. Yet these are the writers whose works are extolled by Dr. Rucco, above the rational and just observations of Boerhaave, Hoffman, Senac, Van Swieten, and Haller, from whose Elem.

Physiol. he has however quoted largely, in the most, if not the only, sensible part of his book.

The chapters on the heart and arteries, and their physico-vital powers, contain nothing of interest, and are remarkable chiefly for the ignorance of anatomy and physiology which they betray. Thus in p. 18, he says, "The heart of the fœtus is destitute of the above-mentioned fleshy septum (ventriculorum), its place being supplied by the foramen ovale, &c." In the first place, the period at which the septum is wanting, is a very early one indeed, and long before the foramen ovale is formed; and in the second, it requires but a very moderate knowledge of anatomy to be aware that the latter never can occupy the situation of the former.

Again. "Almost all the arterial vessels discharge themselves into the venous ramifications, which commence at the point where the arterial ones terminate, and those vessels which do not find venous ramifications free to receive them, unite themselves together by anastomosis." p. 42. Which is as much as to deny the existence of any exhalant or secretory arteries, for these do not terminate by either of the modes which are mentioned. Again, "Aneurisms only occur in this cellular tunic—and this is the reason why true aneurisms never occur in surgery." However this statement may be supported by the authority of Scarpa, it is certainly contrary to experience; and there is scarcely a museum of any extent in London in which the author might not have been convinced of his error.

"On the left ventricle the aorta divides itself into two principal branches, of which the first, because it takes an upward direction, for the purpose of reaching the neck, the head, and the upper extremities, takes the name of the ascending aorta, the other branch is called descending, as it, &c." p. 51.

To judge from this sentence, one might suppose that Dr. R. had never dissected a human subject, the distribution here described being found in ruminating animals, but certainly not in man.

"Like the heart, the arteries have the power of contracting and dilating themselves alternately in the presence of the stimulus of the red blood. That the red blood, by its particular character, contributes to the beating of the arteries, is proved by Bichat's experiment for making the red blood circulate in the veins. For this purpose he applied to the carotid artery and the jugular vein of a living animal two curved tubes, and thus made the red blood pass from one to the other. Scarcely did the red blood commence its passage into the jugular vein, when he observed that the latter gave signs of a species of isochronic oscillation at the beating of the heart, similar to a murmur, noise, or obscure pulsation, which could only be derived from the specific action of the red blood, which, on account of its not finding the same organic dispositions of the arteries in the veins, produces in the latter a species of obscure pulsation, and a decisive and more sensible beat in the former." p. 59.

We do not remember this experiment of Bichat, nor what was the conclusion he drew from it; it is, however, very evident, that the obscure pulsation observed in the vein did not depend on the chemical or vital properties of the blood, but on the impulse communicated to it by the heart, and would, doubtless, have been equally manifested in any flexible, inanimate tube, of the same diameter.

At p. 63 it is stated, that it is "the tonicity of the arterial tunics," and this alone, which keeps an artery closed after the ligature has been removed. Now every tyro knows that this effect is produced by the effusion of lymph and the adhesion of the arterial coats, though it may be true that the artery is subsequently closed by "tonicity," for a certain distance above the spot where the ligature was applied.

Of the various opinions relative to the pulse, which are quoted in the chapters on "the Mechanism and Causes of the Pulse," Dumas believed, that the arteries were not distended by the influx of blood, but spontaneously dilated in order to receive it. p. 79. Soemmering, that the arteries were dilated by the blood, and contracted "vi vitali" to expel it, and that the pulse depended, both on this dilatation and contraction, and on the locomotion of the arteries, especially where they are loosely attached. p. 87. Richerand maintained, that the dilatation was entirely owing to the action of the heart, and the resistance offered by the blood already contained in the arteries, and that the pulse was owing chiefly to this dilatation, but partly to the displacement of the vessel. p. 99. From Dr. Parry's experiments, it should seem that the displacement of locomotion of arteries does not altogether

depend on the action of the heart, as he observed it only in a few instances, where the artery had been laid bare, and then corresponding with the hurried inspirations, and not with the pulsations which might still be felt with the fingers separately. p. 98.

The author, in direct opposition to his own statement, at p. 59, attributes the pulse entirely to the effort made to remove the pressure of the finger or other superincumbent body, and says that "the arteries are always full of blood, and consequently always dilated," and that, therefore, "no reason can be given why they should become dilated during the beating of the pulse." p. 101. Conclusions so absurd do not to require refutation.

Now it is every where admitted, that the arteries always contract when the quantity of blood in them is diminished, so as to adapt themselves to it, however small it may be; it cannot be denied also, that, during the diastole of the ventricles, they will contain less blood than during the systole, since it does not proceed in a continued stream; their diameter must therefore be smaller during the diastole than during the systole, and it is a matter of no moment, whether we call the former or the latter condition their natural one, whether we say, that they are dilated by the impetus of the blood, and return to their natural calibre immediately on the cessation of that impetus, or that they contract, from the diminution of the quantity of blood contained in them, and are restored to their natural size by a fresh influx of it.

In describing the fingers, or the exploratory organs of the pulse, as he calls them, he says, "The nervous papillæ with which the cutis of the fingers is furnished, are found there in greater numbers, a kind of mucous humour which proceeds from the *epidermis* moistening the said nervous papillæ, &c." p. 110. This can hardly be a typographical error, but yet if it were not for the numerous other blunders, we should scarcely be inclined to suppose the author so ignorant as to attribute a secreting power to the epidermis. Under the head of "rules for the correct observation of the pulse," we have among others the following directions, which are judicious enough, though perhaps superfluous. The observer's arm should be steadied and supported, so that it may be maintained in the requisite posture as long as may be necessary, without fatigue or exertion; all the four fingers should be applied to the artery, the index being just above the styloid process of the radius; the patient should always be in an easy position, and his arm free from all pressure and confinement. p. 130. In simple inflammatory fevers the object in feeling the pulse being chiefly to determine its force and frequency, the examination need not be continued so long as in chronic and organic diseases, where many nicer points are to be observed; in the former case, however, the fingers should not be applied for less than a minute.

"That man's natural pulse varies in proportion to the changes which take place in his organisation is an indubitable truth, the evidence of which is supported by the testimony of nature herself, when we observe that the pulse of man, without losing an atom of its natural character, can indicate the state of health in three different ages, though it may be quick and small in children, elevated, full, and strong in adults, and slow, rare, and hard in old persons." p. 151. "In comparing, however, the morbid pulse with the natural one, in any individual, we should attend, rather to the degree of general development, than to the numerical age." p. 159.

"The pulse of women is in general small, quick, yielding, and energetic, whilst that of men is strong, full, and developed." p. 170. "In short persons the pulse is strong, full, quick, and energetic; in tall ones, slow, less full, and weaker; and this is owing in a great measure to the heart being proportionally larger in the former than in the latter." p. 172. "The pulse of large animals is generally rarer than that of small; thus, in the elephant it is only 20 in a minute; in the horse, 32; in the ox, 36; in the sheep, 65; in the dog, 78." p. 175.

After observing that the temperaments have a direct influence upon the variation of the pulse, he takes some pains to prove the incorrectness of the old division into sanguineous, phlegmatic, choleric, and melancholic, which, upon the authority of a modern writer,* he supposes, most erroneously, to be still generally received in this country. p. 179. Yet after all this, and after protesting against the "arbitrary reduction of so many temperaments to four only, as if nature had not formed so many individuals, and not so many classes of individuals," with extreme inconsistency, he pro-

* Hooper, Medical Dictionary.

poses to divide all temperaments into four classes, characterised by the "degree of irritability and sensibility," viz. "fat persons; thin, lean, and emaciated; robust, strong, and lusty; and slender, delicate, and weak;" and two secondary classes, comprising those who come between the first and second, and the third and fourth. p. 189. An arrangement, which is even more vague, and liable to more objections, than the one which he is combating.

We have looked in vain for any original or interesting observations, in the chapter which treats of the influence of the passions on the pulse, and have found nothing but the common-place, and unsatisfactory explanations, to be found in almost every system of physiology.

After mentioning that the circulation is more energetic, and the pulse quicker, in high than in low situations, he blames the practice of sending consumptive patients to the former, because the air, being more oxygenated, "will increase still more the febrile celerity of the pulse, and inflame, alter, and destroy the tissue of the lungs, which is consumed like any other combustible body, when subjected to the process of a rapid combustion, to which respiration bears no slight resemblance."—p. 236.

There are three gross errors comprised within these few words; first, the relative quantity of oxygen in the air is the same on the top of the highest mountain as in the lowest valley; secondly, the process of respiration, at least as far as the substance of the lungs is concerned, cannot be considered as at all analogous to combustion; on the contrary, in almost all diseases of the lungs, especially those of an acute nature, their bulk and weight are increased; thirdly, it has never, as far as we know, been the "practice of medical men," to send their phthisical patients to elevated situations; on the contrary, the sea-coast, and low-sheltered valleys, are generally recommended.

In hot climates the pulse is frequent (100 to 120), and more or less irregular; in cold climates, it is full, strong, steady, and slow. When the inhabitant of a cold country goes into a hot one, his pulse loses in strength and gains in frequency; when the inhabitant of a hot climate goes into a cold one, the reverse occurs.—p. 248 et seq.

Cinchona and analogous medicines, when given during health, or when duly indicated, produce a quicker and fuller, but soft pulse. Camphor, in small doses, and given under the same restrictions, makes the pulse fuller quicker, and harder; but if it be already too quick from debility, it reduces its frequency. Nearly the same may be said of opium, and both medicines, when given in large doses, retard the circulation, and produce a slow, labouring pulse.—266, et seq.

The continued use of mercury quickens the pulse, and renders it rather hard and strong, but where salivation is induced, it becomes "agitated, irritated, and small."—270, et seq.

Purgatives elevate and accelerate the pulse, when they relieve the overloaded or obstructed bowels; but render it small, weak, and slow, when carried so far as to produce frequent watery stools, &c.—p. 272.

Diaphoretic, diuretic, and expectorant medicines, by relieving the circulation, produce a full, soft, strong, rather quick pulse.—p. 294. If used, however, injudiciously, they will "depress the whole system, and render the pulse slow, weak, and small."—p. 275. "Tartarised antimony and digitalis render the pulse weaker and slower," both of them, according to Dr. R., indirectly by exciting nausea and vomiting. Laennec, however, states, that tartar-emetic, in large doses, was equally efficacious in diminishing inflammation, when it did not excite nausea, as when it did; and every tyro is aware, that digitalis seldom causes nausea, though it hardly ever fails to affect the pulse.

The pulse is sometimes intermittent in a state of health, and regular in febrile and other diseases, so that, contrary to what is usually the case, its intermittence is a favourable sign. Instances of this are mentioned by Corvisart, Frank, and several other writers.—p. 290.

After repeating what we have already quoted, relative to the difference of the pulse in different ages and climates, he says,—

"In short, all the difficulty of verifying the presence of morbose pulses, consists in ascertaining, at the moment of examining the artery, whether the beating of the pulse is such as it should be during the state of health of this or that individual, which is easily ascertained by comparing in the mind, the beating of the pulse which is under observation with its physiological (natural)

state; for the analogy, or the difference, will show, either that it is in its natural state, or has suffered some alteration from it."—p. 297.

Why truly so, indeed; for, with the knowledge of the pulse of a given individual during health, any one may easily determine whether it varies or not in disease, and without such a knowledge, the author, with all his "sphygmical" science, does not furnish us with the means of doing so.

When speaking of the changes which the blood undergoes in the lungs, he says,—

"The blood which passes from the last ramifications of the aorta to those of the venæ cavæ, after it has completed its course through the different parts of the body, is black, thick, and altogether vitiated, so to speak, by the excess of carbon and hydrogen, as well as frequently by the presence of many other foreign elements which are there introduced through the thoracic duct, which pours them, with the chyle, into the left subclavian vein. Thus heterogeneous, the blood cannot obey the pressing demands of life, a flame which would certainly be extinguished at the first gush of wind, were it not promptly succoured by the oxygen and caloric, and other nutritive fluids with which the blood loads itself in passing through the lungs."—p. 302.

Now, foreign elements have never been detected in the chyle, at least in a state of health, though it has been supposed, that certain substances are transmitted by it, from their being found in the urine; the blood does not absorb oxygen when passing through the lungs, nor any thing else, except caloric, which cannot be called a nutritive fluid. His physiology is, however, as we have already observed, of a very strange kind; he believes, for instance, that the brain cannot affect the heart immediately, but only through the *lungs*; and not satisfied with making these organs the medium of communication between the heart and the brain, he even supposes that the size of the latter depends on their greater or less development, and says,—

"It is not, therefore, without reason, that those animals whose respiratory apparatus is more complicated and perfect, have the brain proportionably more voluminous, and *vice versa*."—p. 314.

Again: the state of the pulse in inflammation of the stomach, kidneys, or other viscera, he attributes entirely to the stimulus communicated to the heart, by the minute arteries of the part affected, without allowing the nervous system the least influence.—p. 334. In opposition to which we will only observe, that the capillaries of an inflamed joint, or of a limb affected by erysipelas, must be as much "stimulated" as those of an inflamed stomach or kidney, and yet the effect of the pulse, and the system in general, will most commonly be much slighter in the former case than in the latter. But we have quoted errors and absurdities enough, and will now pass on to the practical part of the work, in the second volume, where we may find something a little more satisfactory.

The author divides pulses into three orders, diagnostic, organic, and critical; the first of which, comprehending all those pulses which do not indicate the disease of any one organ in particular, nor the approach of a critical discharge, he subdivides into great and small, hard and soft, strong and weak, quick and slow, frequent and rare, equal and unequal pulses.—p. 4.

"The great morbose pulse" is full, strong, and not easily compressible; it depends "on the increase in the size of the artery, on the degree of force with which the left ventricle contracts, and the quantity of blood which it receives."—p. 8. It is observed chiefly in inflammatory fevers, inflammations, acute hæmorrhage, &c., and is, of course, much more intense in young and robust, than in old and debilitated subjects. Occasionally, however, especially in warm climates, the pulse in real inflammatory disorders and in robust subjects, "from the too great repletion of the arteries, is deep and obscure instead of great," but becomes so after a moderate bleeding; in such cases, however, the other symptoms are generally such as to leave but little doubt or obscurity.

The small pulse is when "the efforts made by the artery to free itself from the pressure, diminish almost to nothing, or are scarcely perceptible."—p. 9.

This is the whole of the author's definition, and it evidently rather applies to the soft, than what is usually called the small pulse, to which, however, the subsequent observations certainly refer. It depends on the depression of the vital powers of the heart, and the consequent imperfect con-

traction of the ventricles, and is almost always a bad symptom, but more especially so in small-pox and the exanthemata, when the eruption is suppressed, or has receded.—p. 27.

The character of the hard pulse "arises from the sharp, resisting, and hard sensation, which the artery causes to the finger;" it depends either on rigidity of the arterial tunics, as is often the case in old persons, or on density of the blood, and vehement contraction of the heart. In the latter case, and when it is also great, it is almost always a symptom of some phlegmasia, as pneumonia, hepatitis, &c.—p. 30. The hard and small pulse, on the contrary, is observed in "internal gout, in nervous chronic rheumatism, in the advanced stage of phthisis, in hysterical and hypochondriacal affections, and many other hyposthenic complaints."—p. 32; and he should have added, in some of the phlegmasia attended with great prostration of strength; the hard and wiry pulse of enteritis, for instance, must be familiar to most of our readers.

The *soft pulse*, which scarcely requires a definition, depends "on the weakness of the contractions of the ventricle, and the somewhat full state of the arteries."—p. 37; (probably also on the atony of their coats;) when the soft pulse is, at the same time, moderately full and regular, it is almost always a favourable symptom, especially if it had been previously hard; if, on the contrary, it be small and irregular, it is as generally unfavourable.—p. 41. et seq.

The *strong pulse* is compounded of the great and the hard pulse, and is observed in "inflammatory, ardent, gastric, and bilious fevers, in the more intense phlegmasia, in sanguineous apoplexy," &c.—p. 46.

As the strong pulse is compounded of the hard and the great, so is the *weak pulse* of the soft and the small, differing from the latter in being dependent more on the weakness of the action of the heart, than on the condition of the artery.—p. 54. It occurs in "malignant, nervous, hectic, and lymphatic fevers, in passive hæmorrhages, in epidemic dysenteries, and in many other disorders which derive their existence from the lowering of the vital powers,"—"and is then a much more important and unfavourable sign than in chronic disorders, which are the effect of distress of mind, want of food or sleep, excessive evacuations, fatigue, &c."—pp. 58—61.

The *quick pulse* differs from the *frequent*, with which it is often confounded, in consisting, not in the shortness of the interval between the separate beats, but in the rapidity with which the artery dilates, and the consequently short space of time during which it is felt by the finger.—p. 64. It is, therefore, opposed to the slow or labouring, as the frequent is to the rare pulse, and may be combined with either of the two last. Yet, after having made this distinction, the author immediately afterwards falls into the common error, and speaks several times of the "quick pulse," the "quickness of the pulse," when alluding solely to the increase in the number of the beats.—p. 66. et seq.

The *slow pulse* is natural in old persons, and in the inhabitants of very cold climates; it is alone of not much value as a diagnostic sign, but when it occurs in acute diseases, and is, at the same time, weak, small, or irregular, it is a very unfavourable symptom, especially when the change from quick to slow takes place suddenly.—p. 72, et seq.

The *frequent pulse* is the most common, and the most relative of all the morbid pulses; for the frequency which would be perfectly natural in an infant, is decidedly morbid in an adult, &c. (In general the pulse of the latter is called frequent, when it amounts to 85 or more in a minute.) It occurs in all febrile diseases, in the exanthemata, synochus, &c.; it is, at the same time, quick, and often strong, in nervous, putrid, and malignant fevers; and in many other asthenic diseases it is quick and weak, and its frequency is generally in a direct ratio with its weakness, the heart being, both in health and disease, most irritable when weakest, as in very young infants, for instance, in whom the pulse is very feeble and rapid.—p. 76, et seq. The frequent, or the frequent and quick pulse, may, therefore, be produced by two very different conditions of the heart, great vigour and energy, and great weakness; in the former case, however, it will be much less easily excited than in the latter.—pp. 80—85.

The *rare pulse*, as has been already stated, depends on the length of the interval between the beats. The pulse of an adult is usually termed rare, when it is below 60 in a minute: it depends on a general want of tone of the whole system, and more

especially of the heart and arteries, and is, therefore, natural in old persons, and in cold-blooded animals; in large animals, also, the pulse is much rarer than in small ones, which possess much more vigour and strength, in proportion to their size.—pp. 86—88.

"But the rarity which is natural to the beatings of the pulse of the inhabitants of cold countries, is evidently different, and arises from the vigorous strength with which the ventricles of the heart send forth and dispatch, in every systole, so much blood to the different parts of the body, that they do not feel the least necessity for repeating their contractions with frequency.—p. 90."

It would have been more correct to have attributed it to the lower degree of irritability which such persons possess; for if the heart be stimulated, it will continue to send forth its blood at a rapid rate, whether there be any "necessity" for it or not.

The rare pulse occurs in most diseases of debility not accompanied by irritation, but is not alone a symptom of much diagnostic value; a good deal must depend upon its being also quick or slow, strong or weak, &c.—p. 93.

Under the head of the *unequal* pulse, the author treats very briefly of the intermittent pulse, and of those which are irregular, either as to force or frequency, which we might certainly have expected to find separately described in a systematic work like this, and where pulses which never were, and probably never will be distinguishable in practice, are minutely described, and separately denominated.—p. 96.

It depends on "some disturbance of the organic functions, either from mental emotions, or from disease of the heart, arterial trunks, lungs, &c.—p. 98.

The regularly unequal pulse, or that in which the unequal stroke or interval recurs, always after the same number of beats, is most frequently observed in chronic,—the irregularly unequal in acute diseases.—p. 99.

In treating of each of the pulses which we have just noticed, the author lays great stress upon the necessity of taking into consideration, in every individual case, the condition of the pulse in the state of health, by which the degree of its morbid deviation must always be measured, a point which seems so plain and obvious, that we have not thought it necessary to touch upon it more particularly, any more than the equally evident one, that the pulse, when morbid, is rarely changed in one respect only, and seldom becomes more frequent, quick, or strong, for instance, without being also harder, softer, or weaker, &c. than natural.

We have been thus particular in going through the first hundred pages of the second volume, because we consider, that excepting the aphorisms (at p. 105 et seq.) and some scattered observations under the head of "critical pulses," it is the only part of it from which any useful information may be obtained; we do not say *original*, for there is nothing which was not known long ago; indeed, whenever the author quits the observations and conclusions of others for his own theories and reasoning, he runs into so much error and absurdity, that we scarcely know whether he is deceived himself, or is attempting to deceive his readers. We have seen some instances of this in the first volume, and we shall find many more in going through the section "on organic pulses;" "The origin and foundation of these, and the justness of the principles on which the doctrine of them is firmly established by nature," the author deduces "from the researches made in the first part of the work," which is what, we believe, none of his readers will be able to do. It will not be worth while to notice the arguments which are adduced in addition to "the researches," to prove the existence of a separate and distinct pulse for the disorder of each organ and each secretion, since besides being very imperfect and confused, they can only serve to prove, that the pulse is affected by the diseases of the different organs, a fact which no one will be inclined to dispute.

Organic pulses he divides into superior and inferior, the former including the pulses of all those organs which are situate above the diaphragm; the latter the pulses of those which lie below it. The superior pulses, which are, "in general, vibrating, quick, and vehement," are the *capital*, *nasal*, *guttural*, and *pectoral*; the inferior, which are "small, deep, and often slow and rare," are the stomachic, hepatic, splenic, intestinal, uterine, hæmorrhoidal, urinary, and cutaneous; the former, therefore, depend on regions, the latter on organs—a very unequal distribution.

The character of the *uterine pulse* is, "that the digital part of the pulsatile artery is close and concentrated, and that in this part is felt the impression of so many small round bodies, which appear to succeed each other with a certain degree of velocity."—p. 253. Like the other organic pulses, it will be most marked in the right or left wrist, according as the right or left side of the organ is most affected; and as the author believes in the long exploded opinion, that the uterus consists of two halves, and that a male fœtus always lies in the right, and a female in the left, he maintains the possibility of predicting by the pulse the sex of the fœtus in utero, and gives three instances where his prognosis (or, as we would say, guess) was correct. He does not, however, mention those in which he was mistaken, which are, doubtless, by far the most numerous.

The chief absurdity in his theory, or doctrine of organic pulses, is, the supposing that a certain phenomenon can take place in one particular artery alone, and in one part only of that artery, from causes which could not possibly affect it, except through the general circulation. All those pulses, or variations of the pulse, which have been hitherto admitted by enlightened physiologists and practitioners, may be felt alike in every artery of the body, allowing only for the difference in the thickness of the integuments, and the relative situation of bones or other hard parts, whilst these "organic pulses" are to be felt at the wrist alone, and there only in a limited space. But let us examine into the particular characters of some of them, and we shall see to how many other objections they are liable. The *capital pulse* is "sometimes only an elevation, extending throughout the whole arterial canal;" in plain English, therefore, it is nothing more than a somewhat full, hard, and jerking pulse, such as is observed in the affections of many different parts, and which cannot possibly serve to distinguish those of the head.

The *pectoral pulse*, as we have seen, serves to indicate the presence of affections of the thoracic viscera; it is true the author does not pretend that the pulse will be the same in every respect in the various diseases of the lungs, heart, and large arteries; but he maintains, that, in all of them, whether it be hard or soft, quick or slow, it will preserve its peculiar organic character, which is not at all consistent with the great difference in the symptoms of these diseases, nor, indeed, with his own arrangement, since he makes a different pulse for the stomach and intestines, the diseases of which are much more analogous in their general effects on the system, than those of the heart and lungs.

The character of the organic pulse of the spleen, is so utterly absurd, that the author must have a very large stock of imagination himself, or suppose a large fund of credulity in his readers, to have committed it to paper. It is going quite far enough to suppose the possibility of even the most practised finger, feeling a minute pyramidal eminence upon a beating artery through the integuments; but when we hear this pyramid described as *vertically cut, and having a small trench on the one side, while it is regular on the other*, we can hardly bring ourselves to believe, that the writer is not speaking of some crystal, or other solid body visible to the eye, rather than of the soft flexible coats of an artery, perceptible only to the touch, and that for less than a second of time. We shall not, however, fatigue our readers by unnecessarily multiplying objections against the doctrine in question, but pass on to the concluding section of the work, which treats of critical pulses.

These are divided nearly in the same manner as the organic pulses,—into nasal, guttural, and pectoral, intestinal, urinary, cutaneous, stomachic, hepatic, hæmorrhoidal, and uterine. The first, however, and the four last, the author considers rather as symptomatic than as really critical, a true crisis being never effected by a discharge of blood from the nose, rectum, or uterus, of alimentary or other substances from the stomach, or of bile from the liver; except that they are fuller and stronger, they are all distinguished by the same characters as the organic pulses, and therefore liable to the same objections. It cannot, however, be denied, that there are some conditions of the pulse, by which certain discharges, whether critical or not, may be predicted, though they are not distinguished by such particular and minute characters as those which are here laid down. Such are the pulses which precede discharges of blood, profuse and critical

sweats, and critical urinary and intestinal evacuations. The first of these has been long known under the name of the double or dicrotous pulse, and consists of two beats occurring almost at the same moment, the last being the strongest. The second, which corresponds almost exactly with the author's cutaneous critical pulse, has been denominated inciduous or wavy, and is characterised by the pulsations gradually increasing in strength and fulness to the fifth or sixth, when suddenly diminishing, and again gradually increasing, &c. The third, which is much more doubtful and obscure, is the converse of this, the pulsations gradually diminishing, instead of increasing, in force and fulness; and the fourth is distinguished only by its smallness, hardness, and intermittency, and by the accompanying symptoms, as coldness and constriction of the skin, &c. These are, we believe, all the critical pulses which have been observed by enlightened and unbiassed practitioners, and the author would have been much better employed in explaining and illustrating them, than in making new and subtle distinctions, which have no foundation in nature, and can only serve to deceive and mislead his readers.

When speaking of the *pectoral critical pulse*, he laments "the prejudice which forbids to profit by the light which the science of the pulse diffuses over practical medicine," and gives, as a fatal instance of the neglect of this light, a case taken from Fouquet, of a young man "attacked with putrid fever, who died from his physician not knowing precisely the character of the critical pectoral pulse."—p. 346. The patient in question, who was in the prime of life, towards the end of the fever, after a very restless night with some dyspnœa, felt better in the morning, and began to cough and expectorate. Notwithstanding this amelioration, because the pulse was rather fuller and quicker, the physician ordered venesection and a purgative, which checked the critical expectoration, and threw back the patient into a worse condition than before; his good constitution, however, overcame this injudicious treatment, and after three days the same symptoms returned, and were again repressed by the same bad treatment. This took place four times, and the patient, as might have been expected, died at last, quite exhausted. Now, without any assistance from the "critical pulse," there were symptoms enough to have shown the impropriety of the first, and much more the second bleeding, and no one who reads the case will, we think, be inclined to conclude with Dr. Rucco, that the patient was lost from want of a precise knowledge of the critical pulse.

In the absence of a better work on the subject, this work will probably find some readers, but it will be of very little use to the student, or to any one who is not well able to separate the metal from the overwhelming dross; and we would recommend to the author (though we fear there is little chance of his attending to our recommendation), if the work should ever reach a second edition, to reject the greater part of the physiological observations, to extend the section on diagnostic, and curtail that on organic pulses, and to have the language and style of the whole corrected by some Englishman, which would certainly render it less disagreeable and more instructive.

It may, perhaps, be as well to mention in conclusion, that the author was professor of medicine, and afterwards of anatomy, at Naples, between the years 1804 and 1815; that in the latter year he went to the United States, as he tells us, solely from a laudable wish to benefit science; practised in New York and Philadelphia until 1820; has since then been practising in London; and that during the greater part of this time, his attention has been especially directed to the science of the pulse. The imperfections of the work cannot, therefore, have been caused by want of time or experience.

GUY'S HOSPITAL.

An extraordinary scene occurred here on Tuesday evening last. The introductory lecture of Mr. Key was to have been given on the Friday previous, but in consequence of the burial of Mr. Hunt (the strange gentleman, who has lately left a great sum of money to this institution) in the vault of the Hospital, the evil day, to the great joy of the lecturer, was postponed until Tuesday the 6th. It appears, that the pupils attending his class, have charged Mr. Key with a violation of a promise, distinctly and unequivocally given in the early part of the last session, that he would award a surgical

prize at the close of it, to the most advanced pupil. Neither was any prize bestowed, nor any reason given for the omission, nor apology of any kind offered to the pupils for the neglect. The gentlemen who felt themselves aggrieved, obtained nothing but contumely from the lecturer, and it became probable, that the feelings which this conduct elicited, would be expressed at the introductory lecture.

The theatre was filled immediately after Dr. Addison's lecture on "imperics," and "impericisms," was concluded, the greater portion of the audience consisting of students entirely new to the school, the lecturers, and the personal friends of Mr. Key. In the affronted class, a strong feeling of discontent was manifest, and at a considerable period after eight, the lecturer made his appearance. Previous to this, the position taken in the theatre by Mr. Bransby Cooper, was the most conspicuous of the proceedings. With an object which subsequently explained the cause, he placed himself at the upper part of the theatre, amongst the students. At different favourable points around were the most prominent of his friends, one of whom commenced the scene, by calling one of the insulted pupils, seated above him, "a scoundrel." The appellant however was promptly silenced. Mr. Key then entered the theatre, surrounded by lecturers and friends, who instantly commenced a round of applause. The manœuvre gained over the neutral men and the new pupils, who were previously ignorant both of Mr. Key and his broken promises. A groan issued from the class—Mr. Bransby passed an encouraging nod to Mr. Key—Mr. Key gave a fascial twitch in token of his coolness. The uproar increased, and Mr. Bransby Cooper rose from his seat. With as much innocence of manner as was consistent with extreme vehemence, he demanded of Mr. Key whether he might be allowed to speak; and before the mock answer could be returned, he singled out a gentleman beneath him—"There is one young man in this theatre, who is so scandalous in his conduct that he ought to be turned out of the place, Sir; he sits here with his hat on; he is the head of this rebellion against you, Sir, and he ought to be turned out of the theatre. If there be any persons here that are discontented with any thing, let them leave." (Great uproar. At least one-third of the gentlemen present were wearing their hats at this time; and it is proper to observe, that not a word or act connected with Mr. Key had come from the student to whom Mr. Bransby Cooper pointed, from the moment of his taking his seat on the bench.)

This gentleman then rose, and attempted to speak—

Mr. Bransby Cooper. "Who's to listen to you, Sir? Turn him out, turn him out, pull him out of the place, get out, Sir!" (The friends of Messrs. Key and Cooper were in ecstasies at the boldness of the latter.)

At the motion of Mr. Key, the lecturers and gentlemen with sticks ceased clapping, and Mr. Key, addressing Mr. B. Cooper, stated, that he need not be told who was the gentleman who had attempted to "vilify" him, and amidst the increasing uproar, produced a letter, which he professed to treat with great contempt, but on which he commented in a manner so unintelligible and so sententiously, that it was impossible to gather the nature of its contents, or the cause of his anger. The lecturer ultimately threw the paper away with an air, having roundly abused the gentleman in question. The insulted student made another attempt to address Mr. Key, and was again clamoured into silence.

Having the field thus clear before him, Mr. Key returned thanks to the spectators and lecturers for the gratifying reception which they had given him, and which the paltry machinations of "that person," and his "agents," had failed to defeat. After a few further observations in the same style, but from which it was impossible to collect any rational history of the question at issue, he came to the subject of the broken promise. "And of what, gentlemen," he inquired, "am I accused? Solely of omitting to distribute a prize to the class, at the end of the course; and the promise of which you will please to remember, was entirely gratuitous, entirely voluntary on my part. Not a word, remember, was said about the prize, in the advertisements of the lectures; not a word about it either in the hospital papers, or the introductory lecture. It was not until the fourth, or I believe the fifth lecture, that I promised to give it. And what, gentlemen, was there in this? It was merely a distinct promise, independent of any thing else, which was not fulfilled. Now, gentlemen, what apology need I give you for the omission? You who know me, will do me the justice to believe that it was perfectly accidental and unintentional. [*A loud whistle from the gallery.*] You will believe me when I say, that I felt most acutely at the omission [*another whistle*], more so indeed than you could possibly have done; I will say no more on the subject; I shall not give any further explanation; I am perfectly willing that the whole onus should fall upon my shoulders; and I beg you distinctly to understand, that not one word of explanation should ever have come from me on the subject, if I had thought that this paltry and pitiful paper (the letter) had emanated from you. I am quite sure

that not a pupil in this class could have acted so unkindly, so ungenerously, and so dastardly, as to have written to me upon the subject. I know the party who has done it, but I shall not defile my lips by hinting at his name. His degradation is complete. He has attempted to injure the fame of this school, and as I alone was found, like Achilles' heel, to be vulnerable, he has attempted to wound it through me. I now take my revenge of the party; I have no feeling for them but that of pity, for your applauses have inspired me with other feelings than I experienced when I first came into this theatre. I felt acutely then. Now I feel nothing but joy and triumph at the failure of their endeavours. Let them go home to their employer, and tell him the result, and the reception which a large and respectable class has given me, and how a man of honour and integrity like myself has turned the accusations brought against him. There is one man,—("Turn him out," from the lecturers, one of whose party endeavoured to rush across the table to get at the pupil referred to, but was stopped by Dr. Williams).

The student rose to reply.

Mr. Key. "You sha'n't attack me."

The Student. "When a promise is made"—

Mr. Bransby Cooper, (with great vehemence) "The officer of the hospital shall turn you out, Sir."

Cries of "Turn him out," from the lecturers and their friends, and "Shame, shame; infamous, Mr. Cooper, shame," arose on all sides, and the uproar became deafening. Not a person, however, ventured to touch the pupil, whose conduct throughout the whole of the evening was most gentlemanly, quiet, and unobtrusive. He again made an effort to reply to the question of Mr. Key, "of what was he accused?"

Mr. Key. "While I occupy the chair of this school, not a word shall be uttered impugning my conduct."

Mr. Bransby Cooper once more interfered. "Have I a right, Sir, to request, that this pupil may be turned out of the theatre?" (Uproar, and cries of shame.)

Every possible instigation having now been made to obtain the ejection of the student, without effect, Mr. Bransby Cooper himself, without the shadow of cause or impulse, but that of unbounded passion, seized the student by the throat and collar, and, with the fury of a bull-dog, dragged him from his seat. The pupil made an effort to punish with his fist the impudent assault, but in an instant several fellows, who had waited the signal, seized his arms, and assisted in the attempt to eject him. The effort, however, was abortive. The fellow-pupils of the student assembled around him, and defeated the intention. The scene now drew near its close. Mr. Bransby Cooper desisted the moment that he saw the proffered opposition, and turning to excuse himself, said, in the same breath with Mr. Key, "Let him stay; don't turn him out."

Mr. Key. "Let him remain, and feel *his conduct!!!*"

Mr. Cooper. "Will you be quiet and hold your tongue, if we let you remain?"

One more trial only was made. James Browell, the steward of the hospital, came forward to the table, and proclaimed to the student, "If the lecture be not allowed to proceed without any further interruption, I shall feel it my duty to call in some person to turn you out of the theatre."

But the student, whose conduct appeared to have been instigated alone by a sense of justice to himself and his fellows, and whose behaviour throughout was without a blemish, was wedged into a seat again; the lecturers retired; the coteries of Mr. Bransby Cooper sat and made grimaces at the gentleman whom they had failed to remove; the discontents jabbered; and Mr. Key commenced his lecture, from which, in about ten minutes, the whole of the audience were staring and gaping in all directions about the theatre. It is sufficient for us to say in conclusion, that Mr Key did *not* promise another surgical prize to the class; and Mr. Bransby Cooper came to his senses sufficiently to apologise to the students (amidst hisses and cries of "trimming") for the outrage by which he had attempted to "uphold the *character of the school.*"

BRITISH COLLEGE OF SURGEONS

"FIRST GENERAL MEETING."

The promoters of this institution, of whom Mr. Sleigh, surgeon of the Western Hospital, is the principal, have taken chambers in Leicester Place, Leicester Square, attached to which is a commodious theatre for public assemblies. In this place, the first general meeting of the friends of the establishment was held on Monday evening last, at which Mr. George Wilkins, of York Place, City Road, a member of the London College of Surgeons, presided. A series of resolutions, eighteen in number, embodying the principles upon which the new college is proposed to be founded, was read, and afterwards submitted to the consideration of a "provisional committee," which was ultimately formed in the room, with the understanding, that after undergoing revision, this, or some similar declaration of the objects of the members, should be published to the profession. As they stand at pre-

sent, it would be useless for us to print them; if not altered in spirit, they may be otherwise materially changed before final adoption. Their general tenor, however, was as follows: that a new college of surgeons has become necessary, to be called "The British College of Surgeons in London;" the suffrage to be universal, and proxies allowed; the members to be formed into three classes,—those who enrol their names before the ensuing year, subscribing one guinea annually, with a donation on entering or not,—those "who have been publicly and duly examined by the council for a diploma," paying some stipulated fee,—and honorary members; (whether any or all of the first class of members were required already to be members of the existing college, or in any other way connected with the profession, the resolutions did not state;) the election of officers to be annual; the council to consist of twelve members, with proper power, and to act as examiners the first year; unrestricted knowledge alone to qualify for the diploma; neither hospitals nor schools to be connected with the College; examinations to be public; power of expulsion to lie with the members; a college "fund" to be established; the committee now elected to last until January next, when the first council is to be elected; the committee to prepare against the next meeting, a petition to the king and parliament, for an act of incorporation, &c.

Mr. Wilkins took the chair, on the motion of Mr. John Thomas and Dr. Epps, the duties of which he prefaced, by stating that he had been a member of the Royal College of Surgeons, London, for thirty-seven years, without having derived any advantage therefrom, "in mind, body, or estate." The purposes of the meeting were then developed by Mr. Sleigh, and arranged under three heads. First, Is reform in the present College needed? Secondly, Is the establishment of a new college the best mode of proceeding? Thirdly, If it be, is the plan of the proposed "British College," the best that can be adopted? The remarks of Mr. Sleigh were directed with great earnestness against the regulations of the College of Surgeons, and the system of self-election.

The most remarkable, however, of his statements, was to the following effect:—after denying that his course had been instigated by the refusal of the College to recognise the practice of the Western Hospital, he said it was impossible he could have been influenced by it, for the College had made an overture to him on the subject, with which he could have closed if he had chosen. "I was told," said the speaker, "a week after the prospectus of the British College of Surgeons was issued, that if I would keep 'quiet' for two or three weeks, the Western Hospital should be recognised. This communication was made to me from one of the most influential members of the Council, through the medium of a third person."

The chairman called upon Mr. Sleigh to name the communicant. After some deliberation, Mr. Sleigh stated that it was Dr. Scudamore.

Mr. Sleigh closed his remarks by declaring that he would accept of no office whatever in the institution, during one year at least from its formation, and read letters from Colchester, Gosport, Oxford, Bristol, Cardiff, &c., the writers of which had seen the prospectus of the proposed college in The Lancet.

Dr. Epps followed, and suggested the propriety of deliberating on the resolutions.

Mr. Thomson, in a fluent and ingenious speech, opposed the proceedings as being based on too narrow principles, and expressed his anxiety to extend reform to the whole of medicine and surgery. Several other medical gentlemen also addressed the meeting.

An irregular discussion ensued on the appointment of a committee. It was proposed on one side that it should consist of every person present, which, had the motion been carried, would have included some parties seated in the pit of the theatre who gave ostensible evidence that the respectability of the committee would not thus have been very scrupulously consulted. It was ultimately decided, that every person present who chose to do so, should enrol his name as a member, and be at liberty to act on the committee. Several gentlemen availed themselves of the proposal, and the meeting, the proceedings of which were throughout attended to with very great interest, separated. Nearly a hundred persons were present

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LONDON MEDICAL SOCIETY.

Monday, September 28th, 1829.

(*First Meeting of the Session.*)

Mr. Callaway, President.

The President opened the Session by a few brief remarks on the objects of the society, and dwelt forcibly on the advantage which would result from the practice of committing the cases brought before the society to paper. Much time, which is now frittered away in collecting those particulars which are omitted in the opening remarks, would probably be saved by the general adoption of this plan, and more satisfactory results obtained, than sometimes ensue.

Mr. Ashwell afterwards read the following case of

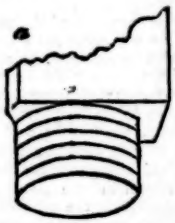
PUERPERAL MANIA.

Mrs. ——, aged thirty-five, was confined with her first child, and the labour was extremely protracted. The cause was ascribed to a want of sufficient dilatation of the os uteri. The obstacles were ultimately overcome by repeated anodyne injections by the rectum, by moderate venesection, and by the administration of opium. Nothing unusual occurred immediately after parturition, with the exception of slight mental excitement, and want of sleep, and the patient went on well for the first four or five days. Soon after the expiration of this time, however, the patient began to talk rapidly and incoherently, complained of burning spots on the forehead, and over the left eye, and detailed, with remarkable accuracy, the early events of her life. It was evident, soon after, that puerperal mania had attacked her. The pulse was 95, and full. The bowels were relieved by daily injections. The skin was not very hot. Ten or twelve ounces of blood were abstracted from the back of the neck by cupping. Five grains of calomel were given, the head was shaved, and an æther wash was ordered to be kept constantly applied. By this treatment she was somewhat relieved; sleep was procured during the night, by the administration of solid opium. She talked incoherently the next day, almost without intermission; and as she had been much exhausted by the labour, and the pulse had fallen to 66, the skin being moist, half a grain of opium was given every four hours, but still without decided amendment. There was now an alteration in the disease, for, instead of its permanent continuance, it occurred in paroxysms, which varied in duration, and, consequently, in the length of the intervals. In some of the seizures she was very violent, requiring considerable force to keep her in bed. Anodynes and mild aperients, with bland and simple nourishment, were now given. The strictest quiet was enjoined, and a week or two elapsed, with but slight variation in the character of the disease. Between the paroxysms, however, she was more rational, and within six weeks of her confinement she was removed into the country. The immediate effect of the change was injurious; the paroxysms became more severe, and the mental aberration appeared more decided. From that time to the present, almost every plan of treatment has been tried, but with indifferent success. During the last few days, five months having now elapsed since her confinement, the paroxysms have assumed a more violent character, apparently owing to the abstraction of blood by leeches; the general health is very much improved; the pulse 75, and soft; the bowels are regular, and the appetite is good; still the paroxysms occur at regular intervals of five hours, to a moment, and last generally for one hour, or one hour and a half. It should be observed, that she was once free from paroxysm for two or three days, and, during this time, was almost wholly rational. I am induced (said Mr. Ashwell) to present this case to the society, first, because I know of scarcely any other, in which puerperal insanity has continued in such regular paroxysms for so long a period; and, secondly, with the hope that some plan of treatment may be suggested, likely to produce a favourable termination in this painful and protracted case.

AUSCULTATION EXTRAORDINARY.

Quoth Rod'rick, "I'll a place contrive
So dark and safe, no man alive
Shall to our private meetings grope:"
"Egad," cries Johnny, "that won't do,
If there's no crack to listen through,
They'll take 'reports' by Stethoscope!"

Sketch of the breech-pin extracted by Mr. Truman, from the orbit of George Agate. For the particulars of the case, *vide* page 77.



a, the part which protruded through he eyelid.

TO CORRESPONDENTS.

Inquisitor.—We cannot correct, or even notice, the errors of others.—Mr. Lawrence's *Lectures* will be continued regularly until completed, and we pledge ourselves to the most minute accuracy.

Communications received from Mr. Wesley—Mr. Howe—Dr. Stirling—Mr J. Davy—Mr. T. C. Girten—Mr. J. C. Parker—Harricus—Studens—Mr. Edward H. Coleman—Dr. Fovell—Mr. Costello—Mr. W. E. Trueman—Mr. R. H. Wood—Mr. Williamson—a Northumberland surgeon—Mr. Kimbell—and Dr. Clanny.